

AMERICAN ECONOMIC ASSOCIATION

Organized at Saratoga, New York, September 9, 1883

PAST OFFICERS

Presidents

FRANCIS A. WALKER,* M.I.T., 1886-92
 CHARLES F. DUNBAR,* Harvard, 1893
 JOHN B. CLARK,* Columbia, 1894-95
 HENRY C. ADAMS,* Michigan, 1896-97
 ARTHUR T. HADLEY,* Yale, 1898-99
 RICHARD T. ELY, Wisconsin, 1900-01
 EDWIN R. A. SELIGMAN,* Columbia, 1902-03
 FRANK W. TAUSSIG, Harvard, 1904-05
 JEREMIAH W. JENKS,* Cornell, 1906-07
 SIMON N. PATTEN,* Pennsylvania, 1908
 DAVIS R. DEWEY, M.I.T., 1909
 EDMUND J. JAMES,* Illinois, 1910
 HENRY W. FARNAM,* Yale, 1911
 FRANK A. FETTER, Princeton, 1912
 DAVID KINLEY, Illinois, 1913
 JOHN H. GRAY, Minnesota, 1914
 WALTER F. WILLCOX, Cornell, 1915
 THOMAS N. CARVER, Harvard, 1916
 JOHN R. COMMONS, Wisconsin, 1917
 IRVING FISHER, Yale, 1918

HENRY B. GARDNER,* Brown, 1919
 HERBERT J. DAVENPORT,* Cornell, 1920
 JACOB H. HOLLANDER, Johns Hopkins, 1921
 HENRY R. SEAGER,* Columbia, 1922
 CARL C. FLEHN, California, 1923
 WESLEY C. MITCHELL, Columbia, 1924
 ALLYN A. YOUNG,* Harvard, 1925
 EDWIN W. KEMMERER, Princeton, 1926
 THOMAS S. ADAMS,* Yale, 1927
 FRED M. TAYLOR,* Michigan, 1928
 EDWIN F. GAY, Harvard, 1929
 MATTHEW B. HAMMOND,* Ohio State, 1930
 ERNEST L. BOGART, Illinois, 1931
 GEORGE E. BARNETT,* Johns Hopkins, 1932
 WILLIAM Z. RIPLEY, Harvard, 1933
 HARRY A. MILLIS, Chicago, 1934
 JOHN M. CLARK, Columbia, 1935
 ALVIN S. JOHNSON, New School, 1936
 OLIVER M. W. SPRAGUE, Harvard, 1937
 ALVIN H. HANSEN, Harvard, 1938
 JACOB VINER, Chicago, 1939

Secretaries

RICHARD T. ELY, 1886-92
 EDWARD A. ROSS, 1893
 JEREMIAH W. JENKS,* 1894-96
 WALTER F. WILLCOX, 1897-99

Treasurers

EDWIN R. A. SELIGMAN,* 1886-91
 FREDERICK B. HAWLEY,* 1892-95
 CHARLES H. HULL, 1896-99

Secretary-Treasurers

CHARLES H. HULL, 1900
 FRANK A. FETTER, 1901-06
 WINTHROP M. DANIELS, 1907-13
 THOMAS N. CARVER, 1909-13
 ALLYN A. YOUNG,* 1914-20
 RAY B. WESTERFIELD, 1921-25
 FREDERICK S. DRIBLER, 1926-33

Officers for 1940

President

FREDERICK C. MILLS, Columbia

Vice-Presidents

JAMES W. ANGELL, Columbia
 CALVIN B. HOOVER, Duke

Secretary-Treasurer

JAMES WASHINGTON BELL, Northwestern

Counsel

JOHN E. WALKER, Washington, D.C.

* Deceased.

Elected Members of the Executive Committee

BENJAMIN M. ANDERSON, Jr., California, at Los Angeles
 MABEL NEWCOMER, Vassar
 PAUL T. HOMAN, Cornell
 RAY B. WESTERFIELD, Yale
 J. DOUGLAS BROWN, Princeton
 GEORGE W. STOCKING, Texas

Managing Editor of the American Economic Review

DAVIS R. DEWEY, M.I.T.

The *American Economic Review* is sent to all members of the American Economic Association as one of the privileges of membership, \$4.00 of the annual membership dues being in payment of a year's subscription to the publication.

The American Economic Review

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June, 1940

Handbook of the American Economic Association

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PURPOSE OF THE AMERICAN ECONOMIC ASSOCIATION

The American Economic Association is an organization composed of persons interested in the study of political economy or the economic phases of political and social questions. As may be seen by examining the list of members printed in this supplement, not only are all the universities and the most prominent colleges in the country represented in the Association by their teachers of economics and related subjects, but a large number of members come from among businessmen, journalists, lawyers, men in public life, and others interested in economic principles, or, more often, in their applications to social life. The Association has, besides, a growing representation in foreign countries.

The annual meetings, held during the Christmas holidays, are arranged as forums for the discussion of scientific questions and problems of social and economic policy. They give opportunity for contact and general understanding among teachers, students, and businessmen interested in such questions. The meetings aim to counteract any tendency to particularism which geographical separation and diverse interests might otherwise foster.

The publications of the Association were begun in March, 1886. The first series of eleven volumes was completed by a general index in 1897. The second series, comprising two volumes, was published in 1897-99, and in addition thereto the Association issued during 1896-99 four volumes of *Economic Studies*. In 1900 a third series of quarterly publications was begun with the Papers and Proceedings of the Twelfth Annual Meeting, and was continued through 1910. *The Economic Bulletin*, issued quarterly and devoted to bibliography and current notes, was also published by the Association during the three years, 1908, 1909, and 1910.

In 1911 the Association began publishing the *American Economic Review*, a quarterly journal devoted to articles on economic subjects, reviews, abstracts of articles in current journals, and a classified bibliography of economic publications. During the twenty-nine years of its existence, the *Review* has made a place for itself among the scientific journals of the country.

The American Economic Association is the organ of no party, sect, or institution. It has no creed. Persons of all shades of economic opinion are found among its members, and widely different views are given a hearing in its annual meetings and through its publications.

With the exception of the editor of the *American Economic Review* and the Secretary-Treasurer, the officers of the Association receive no remuneration for their services. Its entire receipts are expended for the editing, printing, and circulation of the publications and for the annual meetings.

CHARTER AND BYLAWS OF THE AMERICAN ECONOMIC ASSOCIATION

The charter of incorporation of the American Economic Association, incorporated in the District of Columbia, February 3, 1923, provides as follows:

- I. The name of title by which the society shall be known is the American Economic Association.
 - II. The time for which it is organized is perpetual.
 - III. The particular business and object of the society are as follows:
 1. The encouragement of economic research, especially the historical study of the actual conditions of industrial life;
 2. The issue of publications on economic subjects;
 3. The encouragement of perfect freedom of economic discussion. The Association as such will take no partisan attitude, nor will it commit its members to any position on practical economic questions.
 - IV. The number of its trustees for the first year of its existence shall be fourteen.
- The following bylaws have been adopted for the government of the Association:

I. MEMBERSHIP

1. Any person interested in economic inquiry may, on the nomination of a member, be enrolled in this Association.
2. There shall be four classes of members other than honorary; members paying an annual fee of \$5.00; subscribing members paying an annual fee of \$10.00; contributing members paying an annual fee of \$25.00 or more; and life members comprising those members who contribute \$200.00 or more in a single payment. Life members shall be exempt from annual fees. Members shall have each year the privilege of designating the class of membership they choose for that year.
3. Foreign economists of distinction, not exceeding twenty-five in number, may be elected honorary members of the Association.
4. Every member is entitled to receive, as they appear, all reports and publications of the Association.

II. TRUSTEES

The trustees of this Association shall not be less than fourteen or more than fifteen in number, and the Board of Trustees shall be known as the Executive Committee. The Board of Trustees shall be composed of the persons elected as the Executive Committee at the time and place and in the manner set forth in the following bylaw providing for the election of officers.

III. OFFICERS¹

1. The Association shall have the following officers who shall be elective officers: A President, two Vice-Presidents, six elected members of the Executive Committee, three representatives on the Social Science Research Council and two representatives on the American Council of Learned Societies. The terms of office of the President and Vice-Presidents shall each be one year. The terms of office of the six elected members of the Executive Committee and of the three representatives on the Social Science Research Council shall each be three years, two of the six terms of the six elected members of the Executive Committee and one of the three terms of the three representatives on the Social Science Research Council to expire each year. The terms of office of the two representatives on the American Council of Learned Societies shall each be four years, and one of these terms shall expire each second year. Each regular term of office shall coincide with a calendar year or a multiple thereof.

2. As early in each year as practicable, the President of the Association shall appoint a Nominating Committee, consisting of a former president, as chairman, and not less than five other members of the Association. The names of the Committee shall be published in the March or June issue of

¹ Amendment as adopted at the annual meeting, December 29, 1933.

the *American Economic Review* with an invitation to the general membership that suggestions of nominees for the various offices be sent to the chairman of the Committee. The Nominating Committee shall be instructed to present to the Secretary of the Association on or before September 1st of each year two or more nominations for each elective office to be filled, the nominees being members of the Association.

3. Elective officers shall be chosen through elections to be held during the last three¹ months of the term of office of his predecessor. Each member shall be given the opportunity to vote by mail. The results of the election shall be certified and announced by the Secretary at the annual business meeting.

4. The Association shall have the following officers who shall be appointed by the Executive Committee: A Secretary, a Treasurer, a Managing Editor, and a Counsel. The terms of office of each of these officers shall be three calendar years. The Managing Editor shall, with the advice and consent of the Executive Committee, appoint members to an Editorial Board to assist him. The President may, at his discretion and with the advice and consent of the Executive Committee, appoint a Program Committee.

5. The Executive Committee shall consist of the President, the Vice-Presidents, the Secretary, the Treasurer, the Managing Editor, the three ex-Presidents who have last held office, and six elected members, provided that the Secretary, the Treasurer, and the Managing Editor shall not be entitled to vote in the Committee's meetings.

IV. DUTIES OF OFFICERS

1. The President of the Association shall preside at all meetings of the Association and of the Executive Committee, and in consultation with the Program Committee, shall prepare the programs for the annual meetings. In case of his disability, his duties shall devolve upon the Vice-Presidents in the order of their election, upon the Secretary, and upon the Treasurer.

2. The Secretary shall keep the records of the Association and perform such other duties as the Executive Committee may assign to him.

3. The Treasurer shall receive and have the custody of the funds of the Association, subject to the rules of the Executive Committee.

4. The Executive Committee shall have the control and management of the funds of the corporation. It may fill vacancies in the list of officers, and may adopt any rules or regulations for the conduct of its business not inconsistent with this constitution or with rules adopted at the annual meeting. It shall act as a committee on time and place of meetings and perform such other duties as the Association shall delegate to it. A quorum shall consist of five members.

5. The Editorial Board shall have charge of the publications of the Association. The Managing Editor shall be ex officio member and chairman of the Editorial Board.

6. The office of the corporation for legal purposes shall be at the office of the Counsel in the District of Columbia, and legal process against the corporation may be served on said Counsel.

V. ANNUAL MEETING

The annual meeting of this corporation shall be held at such time and place as may be determined by the Executive Committee. Notice of such time and place shall be given by publication in the regular journal of the corporation, now known as the *American Economic Review*, at least ten days prior to such meeting. The first annual meeting shall be held at Providence, Rhode Island, on the 27th of December, 1923, at nine o'clock A.M., unless otherwise ordered by the Executive Committee.

VI. AMENDMENTS

Amendments, after having been approved by a majority of the Executive Committee present at a meeting regularly called, may be adopted by a majority vote of the members present at any regular meeting of the Association.

¹ As amended at the December 29, 1938, annual meeting.

EDITORIAL NOTE

The present edition of the biennial handbook of the Association contains the following information: lists of officers, past and present, charter and bylaws of the Association, a directory of members, as of May 15, 1940, a geographical enumeration of members and subscribers (with addresses), and statistical summaries.

The 1938 edition of the handbook, *Who's Who in the American Economic Association*, contained the following additional information concerning the personnel of our membership: affiliation and rank or position, academic degrees, title of doctoral dissertation (with publication date), fields of specialization, research projects under way, and samples of representative publications. An effort was made to increase the usefulness of this information by classifying members according to the categories currently used in the *American Economic Review* for book and periodical reviews, doctoral dissertation lists, etc. This classification did not prove feasible. Hence it was decided this year to postpone revising the special purpose "who's who" handbook until further progress has been made in perfecting more practicable groupings of fields of specialization. When this has been accomplished, it will be possible to make up specialized lists of economists in the several fields, as well as to publish subject-author indexes of articles and papers included in our publications. In the meantime, the specialized data referred to above is being collected in our files for all new members.

Balloting by mail has served to revive an interest in the geographical distribution of our membership. The referendum of March, 1939, on the choice of the Association's annual meeting place prompted a compilation of members by states and regions. In addition to the list of members and subscribers, we present in the present volume an up-to-date geographical analysis.

Our Association is directly represented on the Social Science Research Council, the American Council of Learned Societies, and the National Bureau of Economic Research. Names of our representatives and of other officers and members of these organizations are presented.

Also of interest to our membership is the information contained at the end of the volume concerning the organization and activities of three regional economic associations with which many of our members are affiliated; namely, the Mid-West Economic Association, the Southern Economic Association, and the Pacific Coast Economic Association.

The increasing amount and variety of inquiries received by this office prompt the Editor to include in this note the following summary of published sources of information concerning the activities of the Association:

1. *The American Economic Review*—a quarterly publication containing main articles, book reviews, bibliographical and personal notes, records of special investigations by individuals and public commissions.
2. *The Proceedings* of the annual meetings of the Association (edited by the Secretary), published as a supplement to the March numbers of the *Review*—main papers, round table summaries, together with reports of the Secretary, the Treasurer, the Editor, Finance Committee, Auditor, standing and special committees, minutes of the Executive Committee and of the business meetings. The appendix contains a cumulative list of the contents of the proceedings from 1911 and the publications of the Association since 1886.

3. *The Handbook*—a biennial publication, usually in the form of a directory containing names and addresses of members together with the year from which dates their continuous membership. In 1938 a specialized "who's who" was issued, containing information concerning the interests and activities of our members. The 1905 Handbook contained brief biographical sketches of members.
4. *Information Booklet*—describing the purposes, organization, and activities of the Association, designed to answer inquiries from prospective members. Sent free upon request.

JAMES WASHINGTON BELL, *Secretary*

HONORARY MEMBERS

Note: The figures in italics indicate the year of election to honorary membership.

- Albert Aftalion 1938
 C. F. Bastable 1926
 James Bonar 1924
 Arthur L. Bowley 1932
 Gustav Cassel 1929
 David Davidson 1938
 L. Einaudi 1926
 Béla Földes 1927
 Eli Heckscher 1938
 John A. Hobson 1938
 Gaston Jèze 1926
 John M. Keynes 1932
 Sir Walter Thomas Layton 1932
 A. Loria 1926
 Arthur Cecil Pigou 1922
 Charles Rist 1922
 D. H. Robertson 1938
 Werner Sombart 1929
 Arthur A. C. Spiethoff 1932
 Sidney Webb (Lord Passfield) 1929

LIST OF MEMBERS

*Life members †Contributing members §Subscribing members ‡Honorary members

NOTE: The figures in italics after the name of a member indicate the year from which dates his continuous membership.

- Abbott, Charles C., Harvard Univ., Grad. School of Bus. Admin., Soldiers Field, Boston, Mass. 1928
- Abbott, Edith, Univ. of Chicago, Soc. Sci. Res. Bldg., Chicago, Ill. 1905
- Abbott, William J., Jr., 438 S. Hanley Rd., St. Louis, Mo. 1939
- Abrahamson, Albert, 76 Federal St., Brunswick, Me. 1927
- Abramovitz, Moses, 452 Riverside Dr., New York, N.Y. 1936
- Abramson, A. Victor, Brookings Inst., 744 Jackson Pl., Washington, D.C. 1939
- Achinstein, Asher, 1050 Park Pl., Brooklyn, N.Y. 1922
- Ackley, Gardner, Ohio State Univ., Dept. of Econ., Columbus, Ohio. 1938
- Adams, Arthur B., Univ. of Oklahoma, Norman, Okla. 1923
- Adams, George P., Jr., 730 Spruce St., Berkeley, Calif. 1938
- Adams, James P., Brown Univ., Providence, R.I. 1921
- Adams, Leonard P., 75 Willett St., Albany, N.Y. 1930
- Adams, Leonard W., Syracuse Univ., School of Bus. Admin., Syracuse, N.Y. 1927
- Adams, Thomas C., 242 S. 12th East St., Salt Lake City, Utah. 1929
- Adams, Walter S., 628 Logan St., Chillicothe, Ill. 1926
- Adamson, Raymond K., 347 W. Dayton St., Madison, Wis. 1934
- †Aftalion, Albert, 60 rue Michel Ange, Paris (16), France. 1938
- Agger, Eugene E., Rutgers Univ., Dept. of Econ., New Brunswick, N.J. 1902
- Aikin, Newton J., 2001 Monroe St., Pullman, Wash. 1927
- Aitchison, Beatrice, Univ. of Oregon, Dept. of Econ., Eugene, Ore. 1940
- §Akerman, Clement, Reed Col., Portland, Ore. 1914
- Akerstrom, Clarence E., 36 Church St., Poultney, Vt. 1936
- Alderfer, Evan B., Univ. of Pennsylvania, Logan Hall, Philadelphia, Pa. 1934
- Alderson, Wroe, Curtis Publishing Co., Philadelphia, Pa. 1939
- Alexander, Charles K., 2019 University Ave., Madison, Wis. 1940
- Alivia, Gavino, Via Cagliari 2, Sassari, Italy. 1934
- Allardt, Irma M., 468 E. 5th St., Mt. Vernon, N.Y. 1940
- Allen, Edward D., Iowa State Col., 114 Engineering Hall, Ames, Iowa. 1939
- Allen, Edward J., 378 College Rd., Orono, Me. 1922
- Allen, Harland H., 10 S. La Salle St., Chicago, Ill. 1928
- Allen, Harry K., Univ. of Illinois, 321 Com. Bldg., Urbana, Ill. 1936
- Allen, Ruth A., Univ. Sta., Austin, Tex. 1928
- Alm, I. W., Indiana Univ., School of Bus. Admin., Bloomington, Ind. 1937
- Alsberg, Carl L., Univ. of California, Giannini Hall, Rm. 207, Berkeley, Calif. 1934
- Altman, Oscar L., S.E.C., Washington, D.C. 1930
- Altschul, Eugen, Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. 1934
- Alyea, Paul E., 712 11th St., Tuscaloosa, Ala. 1928
- Amberg, Alfred A., 12 Cleveland Rd., New Haven, Conn. 1940
- Amos, James E., Univ. of Pittsburgh, Pittsburgh, Pa. 1928
- Andersen, Arthur, 135 S. La Salle St., Chicago, Ill. 1913
- Anderson, Benjamin M., Jr., Univ. of California at Los Angeles, Los Angeles, Calif. 1911
- Anderson, Clay J., Central Missouri State Teachers Col., Warrensburg, Mo. 1928
- Anderson, David F., 247 Canterbury Rd., Westfield, N.J. 1934
- Anderson, Don S., 2214 Chadbourne Ave., Madison, Wis. 1938
- Anderson, Hugo A., 462 Bergen St., Brooklyn, N.Y. 1940
- Anderson, Kurt, 680 Merrick, Detroit, Mich. 1939
- Anderson, Paul E., United Mine Workers of America, 15 and I Sts., N.W., Washington, D.C. 1938
- Anderson, Sven A., 2226 Burdett Ave., Troy, N.Y. 1931
- Anderson, Thomas J., Jr., New York Univ., School of Com., Washington Sq., New York, N.Y. 1922
- Andress, Allen E., Box 164, Hiram, Ohio. 1934
- Andrew, Seymour L., American Tel. and Tel. Co., 195 Broadway, New York, N.Y. 1918
- Andrews, Benjamin R., Columbia Univ., Teachers Col., New York, N.Y. 1917
- Andrews, John B., 131 E. 23rd St., New York, N.Y. 1910

- Andrews, William H., Purdue Univ., Dept. of Hist., Econ., and Gov., Lafayette, Ind. 1937
- Andrus, J. Russell, Judson Col., Rangoon, Burma. 1937
- Angell, James W., Columbia Univ., Fayerweather Hall, New York, N.Y. 1924
- Angus, William N., P.O. Box 345, Bedford Hills, N.Y. 1921
- Anson, Charles P., Roanoke Col., Salem, Va. 1930
- Anthony, Donald E., Kent State Univ., Dept. of Bus. Admin., Kent, Ohio. 1923
- Arant, Roscoe, Univ. of Mississippi, Dept. of Econ., University, Miss. 1936
- Arbuthnot, Charles C., 2263 Demington Dr., Cleveland, Ohio. 1904
- Armbruster, Adolph H., Ohio Univ., Athens, Ohio. 1932
- Armstrong, A. B., North Texas Agric. Col., Dept. of Econ., Arlington, Tex. 1938
- Armstrong, Florence A., 2703 Russell Rd., Alexandria, Va. 1923
- Armstrong, Floyd E., Massachusetts Inst. of Tech., Cambridge, Mass. 1917
- *Armstrong, Henry C., 1012 Palafax St., Pensacola, Fla. 1887
- Armstrong, Ian A., 1191 Euclid Ave., Berkeley, Calif. 1935
- Armstrong, Robert H., 485 Madison Ave., New York, N.Y. 1934
- Arndt, Ernst H. D., Univ. of Pretoria, Pretoria, South Africa. 1923
- Arndt, Karl M., Univ. of Nebraska, Sta. A, Lincoln, Neb. 1925
- Arner, George B. L., 822 Aspen St., N.W., Washington, D.C. 1910
- Arnold, Arthur Z., 133 W. 71st St., New York, N.Y. 1931
- Arthur, Henry B., Swift and Co., General Office, Union Stock Yards, Chicago, Ill. 1940
- Ashburn, Karl E., Southwestern Louisiana Inst., Lafayette, La. 1937
- Ashton, Herbert, 502 Cedar Lane, Swarthmore, Pa. 1928
- Asofsky, Abraham A., 225 Parkside Ave., Brooklyn, N.Y. 1936
- Atkins, Paul M., 199 Inwood Ave., Upper Montclair, N.J. 1915
- Atkins, Willard E., New York Univ., Washington Square Col., New York, N.Y. 1924
- Atkinson, Sterling K., Temple Univ., Philadelphia, Pa. 1930
- Atwood, Albert W., 65 Observatory Circle, Washington, D.C. 1912
- Auerbach, S. Jerome, 686 Alabama Ave., Brooklyn, N.Y. 1939
- Auld, George P., 4 Kenmare Rd., Larchmont, N.Y. 1920
- Aull, George H., Clemson College, S.C. 1928
- Austin, Charles B., 1159 E. Foothill Blvd., Altadena, Calif. 1911
- Austin, William L., Bur. of Census, Washington, D.C. 1924
- Axe, Emerson W., E. W. Axe and Co., Inc., 730 5th Ave., New York, N.Y. 1921
- Aylstock, Earl J., 201 W. 4th St., Cincinnati, Ohio. 1939
- Ayres, Clarence E., Univ. of Texas, Austin, Tex. 1932
- Ayres, Edith, New York Univ., Washington Square Col., New York, N.Y. 1931
- Ayres, Leonard P., Cleveland Trust Co., Cleveland, Ohio. 1921
- Ayres, Milan V., 203 N. Wabash Ave., Chicago, Ill. 1940
- *Babson, Roger W., Babson's Statis. Organization, Washington St., Wellesley Hills, Mass. 1910
- Backman, Jules, 163 Ocean Ave., Brooklyn, N.Y. 1935
- Bacon, Marvin A., Univ. of Michigan, Bur. of Gov., Haven Hall, Ann Arbor, Mich. 1937
- Bader, Louis, New York Univ., School of Com., Washington Sq. E., New York, N.Y. 1925
- Badger, Ralph E., Investment Counsel, Inc., Union Guardian Bldg., Detroit, Mich. 1921
- Badulesco, Victor V., Str. Maria Rosetti, No. 17, Bucarest III, Rumania. 1926
- Bachne, George W., P.O. Box 136, Darien, Conn. 1933
- Baer, Werner, 825 W. End Ave., New York, N.Y. 1938
- Baer, Willis N., 528 N. Florida Ave., De Land, Fla. 1937
- Bagge, Gösta, Skinnarviksringen 16, Stockholm, Sweden. 1904
- Bagley, Eleanor S. (Mrs.), Laurence Brook Manor, East Brunswick, N.J. 1937
- Bagley, William C., Jr., Rutgers Univ., Econ. Dept., New Brunswick, N.J. 1936
- Bailer, Lloyd H., 6053 30th St., Detroit, Mich. 1938
- Bailey, Robert W., Univ. of Akron, Akron, Ohio. 1940
- Bailey, William B., 52 W. Hill Dr., West Hartford, Conn. 1901
- Baird, Frieda, 1830 R St., N.W., Apt. 62, Washington, D.C. 1926
- Baker, Carl O., Schneider Vocational High School, Stockton, Calif. 1926
- Baker, Elizabeth F. (Mrs.), Columbia Univ., Barnard Col., New York, N.Y. 1921
- Baker, George P., 10 Coolidge Hill Rd., Cambridge, Mass. 1928
- Baker, Gladden W., 700 Main St., Hartford, Conn. 1919
- Baker, Harold B., Friends Univ., Wichita, Kan. 1936

- Baker, John W.**, 50 Broad St., New York, N.Y. 1911
- Baker, Oliver P.**, 15478 Pinehurst, Detroit, Mich. 1928
- Baker, Warren J.**, University Club, 803 State St., Madison, Wis. 1931
- Bakke, E. Wight**, Yale Univ., Dept. of Econ., New Haven, Conn. 1939
- Bakken, Henry H.**, Univ. of Wisconsin, Col. of Agric., Madison, Wis. 1930
- Balcom, Bayles R.**, U. S. Steel Corp., 436 7th Ave., Pittsburgh, Pa. 1939
- Balderston, C. Canby**, Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. 1935
- Baldwin, Claude D.**, Univ. of Illinois, 226 Com. Bldg., Urbana, Ill. 1939
- Ballaine, Wesley C.**, 5541 Kimbark Ave., Chicago, Ill. 1939
- Ballard, Margaret L.**, 1745 K St., N.W., Washington, D.C. 1940
- Ballinger, Roy A.**, Louisiana State Univ., University, La. 1933
- Bancroft, E. Clair**, Colgate Univ., Econ. Dept., Hamilton, N.Y. 1919
- Bancroft, Gertrude**, 761 Millbrook Lane, Haverford, Pa. 1935
- Barkas, Benjamin W.**, 5907 Kemble Ave., Philadelphia, Pa. 1923
- Barnard, Chester I.**, 540 Broad St., Newark, N.J. 1934
- Barnes, Charles M.**, U. S. Dept. of State, Washington, D.C. 1913
- Barnes, Gilbert H.**, 115 Montrose Ave., Delaware, Ohio. 1932
- Barnes, Horace R.**, Franklin and Marshall Col., Dept. of Econ. and Bus. Admin., Lancaster, Pa. 1923
- Barnes, Irston R.**, 93A Yale Sta., New Haven, Conn. 1928
- Barnes, Lillian (Mrs.)**, 3133 Connecticut Ave., N.W., Washington, D.C. 1940
- Barnett, Paul**, Univ. of Tennessee, Knoxville, Tenn. 1938
- Barnwell, George W.**, Stevens Inst. of Tech., Hoboken, N.J. 1935
- Barr, Andrew**, 2000 Connecticut Ave., N.W., Washington, D.C. 1928
- Barrett, Don C.**, R.R. 7, Box 490, Indianapolis, Ind. 1895
- Bartels, Robert D. W.**, Univ. of Washington, Col. of Econ. and Bus., Seattle, Wash. 1936
- Bartlett, C. A.**, Post Box 26, Zanzibar, Africa. 1933
- Bartlett, Roland W.**, 219 New Agric. Bldg., Urbana, Ill. 1931
- Baruch, B. M.**, 597 Madison Ave., New York, N.Y. 1913
- Baska, Louis M.**, St. Benedicts Col., Atchison, Kans. 1935
- Bass, Lawrence W.**, Mellon Inst. of Indus. Res., Pittsburgh, Pa. 1930
- †Bastable, C. F.**, 52 Brighton Rd., Rathgar Dublin, Ireland. 1926
- Batchelor, Joseph A.**, Indiana Univ., Dept. of Econ., Bloomington, Ind. 1932
- Bauer, John**, American Public Utilities Bur., 280 Broadway, New York, N.Y. 1910
- Baugh, Russell H.**, Oklahoma A. and M. Col., Dept. of Econ., Stillwater, Okla. 1932
- Baumert, Watson A.**, Shellball Apt., Kew Gardens, L.I., N.Y. 1927
- Baxter, Robert J.**, Univ. of Pittsburgh, 2332 Cathedral of Learning, Pittsburgh, Pa. 1939
- Bayard, C. Crowell, Clark, Sinsabaugh and Co.**, Chrysler Bldg., New York, N.Y. 1939
- Baysinger, Reaves H.**, Box 89, Dewitt, N.Y. 1933
- Beach, E. F.**, Scarsdale Manor Apts., Scarsdale, N.Y. 1939
- Beach, W. Edwards**, 3520 77th St., Jackson Heights, N.Y. 1926
- Beadles, William T.**, Illinois Wesleyan Univ., Dept. of Econ., Bloomington, Ill. 1931
- Beales, Le Verne**, 4124 5th St., N.W., Washington, D.C. 1925
- Bearnson, J. B.**, Univ. of Utah, Salt Lake City, Utah. 1939
- Beatty, Willard C.**, Brown Univ., Dept. of Econ., Providence, R.I. 1923
- Beaty, Earl**, Emmanuel Missionary Col., Berrien Springs, Mich. 1939
- Becker, Nathan M.**, Univ. of Toledo, Dept. of Econ., Toledo, Ohio. 1936
- Beckett, Grace L.**, Indiana Central Col., New Hall, Indianapolis, Ind. 1936
- Beckhart, Benjamin H.**, Columbia Univ., 406 School of Bus., New York, N.Y. 1922
- Beckman, Theodore N.**, Ohio State Univ., Col. of Com. and Journ., Columbus, Ohio. 1921
- Beckner, Earl R.**, 111 George Mason Dr., Apt. 1, Arlington, Va. 1924
- Beede, Kenneth C.**, 4 Cleave Dr., Falls Church, Va. 1939
- Behling, Burton N.**, I.C.C., Washington, D.C. 1934
- Behringer, Edward N.**, North Texas Agric. Col., Dept. of Soc. Sci., Arlington, Tex. 1934
- Bekker, Konrad**, 222 Waller Ave., Lexington, Ky. 1939
- Belcher, Alice E.**, Milwaukee-Downer Col., Milwaukee, Wis. 1910
- Belcher, Donald R.**, 195 Broadway, New York, N.Y. 1921
- *Bell, James C.**, Locust Valley Rd., Brookville, L.I., N.Y. 1922
- Bell, James Washington**, 1745 Chicago Ave., Evanston, Ill. 1916
- Bell, John F.**, Temple Univ., Philadelphia, Pa. 1927

- Bell**, Raymond E., 205 E. 42nd St., New York, N.Y. 1924
- Bell**, Spurgeon, Brookings Inst., 722 Jackson Pl., Washington, D.C. 1925
- Bellemore**, Douglas H., Univ. of Toledo, Toledo, Ohio. 1938
- Beller**, William C., 18 W. 85th St., New York, N.Y. 1937
- Belmore**, Carl W., 24 Elm St., Wakefield, Mass. 1936
- Beltran**, Pedro G., 30 Exchange St. E., Liverpool 2, England. 1938
- Bender**, Wesley C., Univ. of Notre Dame, Notre Dame, Ind. 1937
- Bendiner**, Irvin, 942 Widener Bldg., Philadelphia, Pa. 1934
- Benedict**, Murray R., Univ. of California, Gianini Found., Berkeley, Calif. 1928
- Bengston**, Karl J., Salinas Junior Col., Salinas, Calif. 1938
- Benner**, Claude L., Continental American Life Ins. Co., 2024 du Pont Bldg., Wilmington, Del. 1922
- Bennett**, Philip A., 150 N. Day St., Orange, N.J. 1936
- Bennett**, Virgil E., Bennett and Co., 200 Beaver St., Beaver, Pa. 1936
- Bennett**, William W., Union Col., Schenectady, N.Y. 1921
- Bent**, Joseph G., Jr., 19 Congress St., Boston, Mass. 1937
- Berger**, Adolph O., 1446 E. 110th St., Cleveland, Ohio. 1934
- Berglund**, Abraham, Box 1606, Univ. Sta., Charlottesville, Va. 1906
- Bergson** (Burk), Abram, Kirkland H-14, Harvard Univ., Cambridge, Mass. 1937
- Bermingham**, Edward J., 231 S. La Salle St., Chicago, Ill. 1934
- Bermudez**, Jorge, Univ. of Puerto Rico, Rio Piedras, Porto Rico. 1932
- Bernfield**, Frederick M., Citadel Sta., Charleston, S.C. 1937
- Bernhardt**, Joshua, 6800 Brookville Rd., Chevy Chase, Md. 1920
- Bernheim**, George B., 300 Observer Highway, Hoboken, N.J. 1916
- Bernstein**, Edward M., Univ. of North Carolina, Chapel Hill, N.C. 1935
- Bernstein**, Louis M., R. H. Macy and Co., New York, N.Y. 1932
- Berridge**, William A., Metropolitan Life Ins. Co., 1 Madison Ave., New York N.Y. 1921
- Berry**, Thomas S., Box 4703, Duke Sta., Durham, N.C. 1933
- Bertram**, Rudolf F., 3017 Kenilworth Lane, Knoxville, Tenn. 1937
- Best**, Harry, Univ. of Kentucky, Lexington, Ky. 1936
- Bethke**, William, La Salle Extension Univ., 4046 Michigan Ave., Chicago, Ill. 1919
- Bezanson**, Anne, Room 26, 3440 Walnut St., Philadelphia, Pa. 1918
- Bice**, Hubert E., Syracuse Univ., Syracuse, N.Y. 1917
- Biddle**, Clinton P., Orchard Ave., R.R., Auburndale, Mass. 1925
- Bidgood**, Lee, University, Ala. 1911
- Bidwell**, Percy W., 34 Chase Rd., Scarsdale, N.Y. 1912
- Bigelow**, Howard F., Western State Normal, Kalamazoo, Mich. 1927
- Bigelow**, Karl W., American Council on Education, 744 Jackson Pl., N.W., Washington, D.C. 1925
- Bigge**, George E., 7 Inverness Dr., Chevy Chase, Md. 1931
- Bigham**, Truman C., Univ. of Florida, Gainesville, Fla. 1928
- Billig**, William C., Univ. of Southern California, Col. of Com., Los Angeles, Calif. 1936
- Billings**, Arthur G., 37 Hawthorn St., Cambridge, Mass. 1940
- *Bing**, Alexander M., 18 E. 48th St., New York, N.Y. 1919
- Bird**, Dillard E., Univ. of Pennsylvania, 103 Logan Hall, Philadelphia, Pa. 1938
- Bird**, Francis H., Univ. of Cincinnati, Col. of Eng. and Com., Cincinnati, Ohio. 1909
- Biscoe**, Alvin B., 114 S. 4th St., Lewisburg, Pa. 1937
- Bishop**, Philip W., 173 Lawrence St., New Haven, Conn. 1940
- Bishop**, Ward L., Lehigh Univ., Col. of Bus. Admin., Bethlehem, Pa. 1932
- Bissell**, Richard M., Jr., 1292 Yale Sta., New Haven, Conn. 1936
- Bittermann**, Henry J., Ohio State Univ., Dept. of Econ., Columbus, Ohio. 1928
- Black**, Albert G., U. S. Dept. of Agric., Farm Credit Admin., Washington, D.C. 1925
- Black**, Henry R. E., Owens-Corning Fiberglas Corp., Toledo, Ohio. 1940
- Black**, John D., Harvard Univ., Littauer School of Pub. Admin., Cambridge, Mass. 1919
- Blackburn**, Burr, Household Finance Corp., 919 N. Michigan Ave., Chicago, Ill. 1929
- Blackburn**, Raymond F., Univ. of Pittsburgh, Dept. of Statistics, Pittsburgh, Pa. 1939
- Blackstone**, Alva E., 121 Walnut Ave., Wayne, Pa. 1935
- Bladen**, Vincent W., Univ. of Toronto, 273 Bloor St. W., Toronto, Ont., Canada. 1924
- Blaine**, Emmons (Mrs.), 101 E. Erie St., Chicago, Ill. 1910
- Blaine**, James C. D., Univ. of North Carolina, 312 Bingham Hall, Chapel Hill, N.C. 1940

- Blair, Jacob J., 765 Gypsy Lane, Country Club Heights, Mt. Lebanon, Pa. 1935
- Blake, Edwin M., Drawer A, Pratt Sta., Brooklyn, N.Y. 1909
- Blakey, Roy G., 1115 River Rd. E., Minneapolis, Minn. 1912
- Blanchard, John D., Groton, Tompkins Co., N.Y. 1930
- Blanchard, Ralph H., Columbia Univ., New York, N.Y. 1912
- Blaser, Arthur F., Jr., 512 W. 122nd St., New York, N.Y. 1940
- Bliss, Charles A., Lincoln, Mass. 1928
- Bliss, Z. W., Box 156, Providence, R.I. 1912
- Bloch, Henri S., Univ. of Chicago, Dept. of Econ., Chicago, Ill. 1938
- Blodgett, Ralph H., Univ. of Illinois, Dept. of Econ., Urbana, Ill. 1935
- Bloomberg, Lawrence N., American Bankers Assn., Washington Bldg., Washington, D.C. 1935
- Bloomfield, Arthur I., 4378 Western Ave., Montreal, Que., Canada. 1938
- Bloomfield, Daniel, 80 Federal St., Boston, Mass. 1934
- Blough, J. Roy, East Falls Church, Va. 1924
- Blum, Jay W., Gambier, Ohio. 1937
- Boals, Gordon P., U. S. Dept. of Agric., Office of For. Agric. Rela., Bur. of Agric. Econ., Washington, D.C. 1929
- Boatwright, John W., P.O. Box S, 910 S. Michigan Ave., Chicago, Ill. 1931
- Bober, Mandell M., Lawrence Col., Appleton, Wis. 1927
- Bober, William C., Johns Manville Corp., 22 E. 40th St., New York, N.Y. 1939
- Bodde, Leo A., Rockhurst Col., 5225 Troost Ave., Kansas City, Mo. 1939
- Boddy, Francis M., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. 1934
- Bodfish, Morton, 333 N. Michigan Ave., Chicago, Ill. 1926
- Bodman, Henry T., Nat. Bank of Detroit, Trust Dept., Detroit, Mich. 1938
- Boehmle, Erwin W., Central Y.M.C.A. Col., 19 S. La Salle St., Chicago, Ill. 1939
- Boer, Arend E., Univ. of Pittsburgh, Pittsburgh, Pa. 1937
- Boettler, Herbert F., 630 Vassar Ave., University City, Mo. 1922
- Bogart, Ernest L., 35 E. 9th St., New York, N.Y. 1897
- Bogen, Jules I., 315 W. 106th St., New York, N.Y. 1931
- Boggs, Theodore H., Stanford University, Calif. 1935
- Bohan, Richard T., 2843 Fenwood Ave., Terre Haute, Ind. 1938
- Bohlman, Herbert W., Drake Univ., Des Moines, Iowa. 1924
- Bohn, Carl, 331 Bement Ave., Staten Island, N.Y. 1936
- Bolden, Norman R., 309 Carmel St., Charlotte, N.C. 1932
- †Bonar, James, 13 Redington Rd., Hampstead, London, N.W. 3, England. 1924
- Bonbright, James C., Columbia Univ., School of Bus., New York, N.Y. 1915
- Bond, Floyd A., Univ. of Michigan, Econ. Dept., Ann Arbor, Mich. 1939
- Boner, J. Russell, Univ. of Alabama, Com. Bldg., University, Ala. 1937
- Bonnell, Allen T., Univ. of North Carolina, School of Com., Chapel Hill, N.C. 1936
- Bonnett, Clarence E., Tulane Univ., New Orleans, La. 1936
- Boone, Gladys, Sweet Briar Col., Sweet Briar, Va. 1928
- Boord, H. O., 305 Wilson Ave., Washington, Pa. 1937
- Bopp, Karl R., Univ. of Missouri, 106 B. and P. A. Bldg., Columbia, Mo. 1936
- Borak, Arthur M., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. 1927
- Borden, Neil H., Morgan Hall, Soldiers Field, Boston, Mass. 1925
- Bornemann, Alfred, 1618 Jefferson Ave., Brooklyn, N.Y. 1939
- Borth, Daniel, Jr., University, La. 1935
- Bortz, Nelson M., The Four Gables, Cabin John, Md. 1932
- Bosland, Chelcie C., Brown Univ., Dept. of Econ., Providence, R.I. 1925
- Bothwell, Wilber C., Washington Univ., Dept. of Econ., St. Louis, Mo. 1937
- Boudin, Louis B., 20 W. 43rd St., New York, N.Y. 1912
- Bourne, William N., 66 Sparks St., Cambridge, Mass. 1940
- Bowden, Witt, 2032 Belmont Rd., N.W., Washington, D.C. 1931
- Bowen, Howard R., State Univ. of Iowa, Iowa City, Iowa. 1936
- Bowers, Edison L., Ohio State Univ., Com. Bldg., Columbus, Ohio. 1923
- Bowers, Robert S., Western State Teachers Col., Kalamazoo, Mich. 1937
- †Bowley, Arthur L., Univ. of London, London, England. 1932
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- Bowman, Mary J., Iowa State Col., 207 Agric. Annex, Ames, Iowa. 1934
- Bowman, Raymond T., Univ. of Pennsylvania, Dept. of Econ., Philadelphia, Pa. 1929
- Bowman, Ward S., Jr., 2504 41st St., N.W., Washington, D.C. 1937

- Bozic, Alexander**, 2303 Union Central Bldg., Cincinnati, Ohio. 1938
- Bradbury, Robert W.**, Louisiana State Univ., Col. of Com., University, La. 1940
- Braden, Samuel E.**, Indiana Univ., Dept. of Econ., Bloomington, Ind. 1938
- Bradford, Frederick A.**, Lehigh Univ., Col. of Bus. Admin., Bethlehem, Pa. 1923
- Bradley, Clifton J.**, U. S. Dept. of Agric., Kimball Bldg., Parsons, Kans. 1930
- Bradley, Richards M.**, 60 State St., Boston, Mass. 1912
- Brainard, Harry G.**, Southern Illinois State Normal Univ., Econ. Dept., Carbondale, Ill. 1935
- Brainerd, Carol P. (Mrs.)**, R.R. 2, West Chester, Pa. 1936
- Bramble, Harlan P.**, 509 W. 121st St., New York, N.Y. 1940
- Brand, Charles J.**, 616 Investment Bldg., Washington, D.C. 1914
- Brandenburg, Samuel J.**, Clark Univ., Worcester, Mass. 1912
- Brandis, Roland B., Jr.**, Soc. Sec. Bd., Field Office, Greensboro, N.C. 1940
- Bratt, Elmer C.**, Lehigh Univ., Dept. of Econ., Bethlehem, Pa. 1928
- Bratter, Herbert M.**, Marlyn Apts., 3000 39th St., N.W., Washington, D.C. 1935
- Braunthal, Alfred**, 39-89 46th St., Long Island City, N.Y. 1939
- Bray, Charles P.**, First Nat. Bank Bldg., Oshkosh, Wis. 1935
- Bray, William**, 402 Oak Ave., Ithaca, N.Y. 1940
- Breckenridge, Walter N.**, Box 143, Waterville, Me. 1929
- Breckinridge, Frank P.**, 134 S. La Salle St., Chicago, Ill. 1935
- Bredin, James H.**, 2222 Sherman Ave., Evanston, Ill. 1934
- Bremer, C. Daniel**, 649 Fifth Ave., New York, N.Y. 1930
- Brethouwer, Melvin W.**, 510 W. 110th St., New York, N.Y. 1936
- Brewster, Maurice R.**, Georgia Tech., Atlanta, Ga. 1939
- Breyer, Ralph F.**, Univ. of Pennsylvania, 308 Logan Hall, Philadelphia, Pa. 1921
- Bridenstine, Merwyn G.**, Butler Univ., Indianapolis, Ind. 1930
- Briefs, Goetz A.**, 4 Kenilworth Dr., Chevy Chase, Washington, D.C. 1938
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- Briggs, Royal J.**, Kemper Military School, Boonville, Mo. 1935
- Briggs, Robert P.**, Univ. of Michigan, Econ. Dept., Ann Arbor, Mich. 1928
- Brimacombe, Stuart H.**, 2970 Sheridan Rd., Chicago, Ill. 1939
- Brisco, Norris A.**, New York Univ., Washington Sq., New York, N.Y. 1906
- Brissenden, Paul F.**, Columbia Univ., New York, N.Y. 1921
- Brock, Leslie V.**, 164 1st Ave., Waynesburg, Pa. 1936
- Bronfenbrenner, Martin**, Central Y.M.C.A. Col., Chicago, Ill. 1938
- Brooks, Benjamin F.**, Butler Univ., Indianapolis, Ind. 1939
- Brooks, Robert P.**, Univ. of Georgia, School of Com., Athens, Ga. 1920
- Brossard, Edgar B.**, U. S. Tariff Com., 7th and E Sts., N.W., Washington, D.C. 1937
- Brown, Bonnar**, Fed. Res. System, Div. of Security Loans, Washington, D.C. 1938
- Brown, Cecil K.**, Davidson Col., Davidson, N.C. 1928
- Brown, Courtney C.**, Whippoorwill, Armonk, N.Y. 1935
- Brown, Douglass V.**, 15 Griggs Ter., Brookline, Mass. 1932
- Brown, Elmer J.**, Univ. of Arizona, Tucson, Ariz. 1911
- Brown, Emily C.**, Vassar Col., Kendrick House, Poughkeepsie, N.Y. 1927
- Brown, George H.**, Univ. of Chicago, School of Bus., Chicago, Ill. 1940
- Brown, George T.**, Catholic Univ. of America, Washington, D.C. 1935
- Brown, Gerard S.**, 120 S. La Salle St., Room 1336, Chicago, Ill. 1929
- Brown, Harry G.**, 403 S. Garth Ave., Columbia, Mo. 1909
- Brown, J. Douglas**, 148 Mercer St., Princeton, N.J. 1925
- *Brown, Lathrop**, Montauk, N.Y. 1921
- Brown, Lyndon O.**, Northwestern Univ., School of Com., Evanston, Ill. 1928
- Brown, Pembroke H.**, Univ. of Illinois, 109 Com. Bldg., Urbana, Ill. 1917
- Brown, Philip M.**, 3 Page St., Brunswick, Me. 1925
- Brown, Theodore H.**, 25 Meadow Way, Cambridge, Mass. 1921
- Brown, William A., Jr.**, Brown Univ., Dept. of Econ., Providence, R.I. 1926
- Browne, Arthur E.**, 4135 Henderson Rd., Arlington, Va. 1937
- Brudzinski, Tadeusz J.**, Ul. Jasna 10 m. 6, Warsaw, Poland. 1932
- Bruere, Henry**, Bowery Savings Bank, 110 E. 42nd St., New York, N.Y. 1934
- Brumbaugh, Martin A.**, Univ. of Buffalo, Bur. of Bus. and Soc. Res., Buffalo, N.Y. 1930
- Bryan, Leslie A.**, 211 Standish Dr., Syracuse, N.Y. 1929

- Bryan, Robert F., 52 E. 52nd St., New York, N.Y. 1936
- Bryant, Edward S., Harvard Club, Boston, Mass. 1912
- Bryant, Lyle C., Indiana Univ., Bloomington, Ind. 1935
- Bryce, Robert B., 372 Driveway, Ottawa, Ont., Canada. 1934
- Buchan, Leslie J., Tulane Univ., New Orleans, La. 1940
- Buchanan, Allen, U. S. Tariff Com., 7th and E St., N.W., Washington, D.C. 1936
- Buchanan, Daniel H., 601 Park Pl., Chapel Hill, N.C. 1929
- Buchanan, Frank, Kessler Bldg., Apt. 2, McKeesport, Pa. 1935
- Buchanan, Norman S., Univ. of California, Dept. of Econ., Berkeley, Calif. 1930
- Buck, Norman S., Yale Sta., New Haven, Conn. 1920
- Buckley, Louis F., Box 124, Notre Dame, Ind. 1939
- Bucknam, Roland F., 159 S. Allen St., Albany, N.Y. 1940
- Budd, Thomas A., Univ. of Pennsylvania, Logan Hall, Philadelphia, Pa. 1925
- Buechel, Frederick A., Univ. of Texas, Bur. of Bus. Res., Austin, Tex. 1921
- Buehler, Alfred G., Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. 1925
- Bullock, Roy J., Johns Hopkins Univ., Baltimore, Md. 1930
- Bullock, Theodore T., 2420 R., Lincoln, Neb. 1913
- Bunkhead, Jesse, Sterling Hall, Madison, Wis. 1939
- Bunting, Frederick H., Univ. of North Carolina, Woman's Col., Greensboro, N.C. 1940
- Burbank, Harold H., 41 Fresh Pond Lane, Cambridge, Mass. 1909
- Burdick, E. Douglass, Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. 1933
- Burdick, Raymond T., Colorado Agric. Col., Fort Collins, Colo. 1923
- Burgess, Eugene W., U. S. Steel Export Co., 30 Church St., New York, N.Y. 1928
- Burgess, Kenneth F., Sidley, McPherson, Austin and Burgess, 11 S. La Salle St., Chicago, Ill. 1922
- Burgess, Robert W., Western Electric Co., 195 Broadway, New York, N.Y. 1924
- Burgess, W. Randolph, 55 Wall St., New York, N.Y. 1924
- Burhans, Nathaniel C., 1806 Orchard St., Alexandria, Va. 1939
- Burke, Joseph W., P.O. Box 218, Colorado Springs, Colo. 1939
- Burns, Arthur E., 6521 32nd St., N.W., Washington, D.C. 1937
- Burns, Arthur F., 370 Central Park W., New York, N.Y. 1930
- Burns, Arthur R., Columbia Univ., New York, N.Y. 1938
- Burns, Eveline M. (Mrs.), Columbia Univ., New York, N.Y. 1925
- Burns, Robert K., Science Research Associates, 600 S. Michigan Ave., Chicago, Ill. 1937
- Burnstan, Arthur R., Carleton Col., Northfield, Minn. 1937
- Burrill, Cecil L., Sherman Hall, Soldiers Field, Boston, Mass. 1940
- Burris, Edward C., Oklahoma A. and M. Col., School of Com., Stillwater, Okla. 1936
- Burroughs, Roy J., F.H.A., Rental Housing Div., Washington, D.C. 1929
- Bursick, Ralph C., Univ. of Cincinnati, Com. Dept., Cincinnati, Ohio. 1935
- Burtchett, Floyd F., Univ. of California at Los Angeles, Dept. of Econ., Los Angeles, Calif. 1925
- Burt, Everett J., Jr., Univ. of Maine, Dept. of Econ. and Soc., Orono, Me. 1940
- *Bush, Irving T., 280 Park Ave., New York, N.Y. 1911
- Bushey, J. Hobart, Hunter Col., 68th St. and Lexington Ave., New York, N.Y. 1940
- Bussing, Irvin, Room 1408, 14 Wall St., New York, N.Y. 1935
- Butt, S. McClellan, 1843 Mintwood Pl., N.W., Washington, D.C. 1936
- Butt, William E., 538 E. Hamilton Ave., State College, Pa. 1922
- Buttenheim, Harold S., 470 4th Ave., New York, N.Y. 1933
- Butters, J. Keith, 33 Sacramento St., Cambridge, Mass. 1938
- Bye, Carl R., Syracuse Univ., Dept. of Econ., Syracuse, N.Y. 1934
- Bye, Raymond T., Univ. of Pennsylvania, Philadelphia, Pa. 1920
- Byrne, John M., University Club, 4th and Broadway, Main P.O., Cincinnati, Ohio. 1926
- Cable, John R., Washington Univ., St. Louis, Mo. 1922
- Cadman, John W., Jr., 99 Alexander St., Princeton, N.J. 1937
- Cady, Elwyn L., 5100 Woodland Ave., Kansas City, Mo. 1931
- Cady, George J., 1571 Wesley Ave., Evanston, Ill. 1927
- Cahill, Marion C., 460 Riverside Dr., New York, N.Y. 1931
- Cahn, Bertram J., B. Kuppenheimer and Co., Inc., Congress and Franklin Sts., Chicago, Ill. 1935
- Cahn, Frances T., 3000 39th St., N.W., Washington, D.C. 1929

- Cahn**, Reuben D., 202 Vine Ave., Highland Park, Ill. 1923
- Calder**, Philip R., Revere Sugar Refinery, 333 Medford St., Charlestown, Mass. 1934
- Cale**, Edward G., University of Richmond, Va. 1937
- Calhoun**, Charles P., Ronald Press Co., 15 E. 26th St., New York, N.Y. 1927
- Calhoun**, Wilbur P., Univ. of Cincinnati, Cincinnati, Ohio. 1935
- Calkins**, Francis J., Univ. of Notre Dame, Notre Dame, Ind. 1934
- Calkins**, Robert D., Univ. of California, Dept. of Econ., Berkeley, Calif. 1930
- Cameron**, Roy E., State Teachers Col., San Diego, Calif. 1930
- Camp**, Chester B., Butler Univ., Dept. of Econ., Indianapolis, Ind. 1930
- Campbell**, Claude A., Univ. of Oklahoma, Col. of Bus. Admin., Box 52, Faculty Exchange, Norman, Okla. 1936
- Campbell**, F. Newell, 2953 McKinley St., Washington, D.C. 1938
- Campbell**, James A., Knox Col., Galesburg, Ill. 1928
- Campbell**, Robert A., Vanderbilt Univ., Nashville, Tenn. 1908
- Cance**, Alexander E., Massachusetts State Col., Amherst, Mass. 1908
- Canfield**, Adelbert J., 40 Inman St., Cambridge, Mass. 1918
- Canning**, John B., Box 76, Stanford University, Cal. 1920
- Caplan**, Benjamin, Ohio State Univ., Dept. of Econ., Columbus, Ohio. 1935
- *Capp**, Seth B., P.O. Box 2054, Philadelphia, Pa. 1912
- Carey**, Robert L., Columbia Univ., 718 Hamilton Hall, New York, N.Y. 1931
- Carlson**, Knute E., 5241 42nd St., N.W., Washington, D.C. 1932
- Carlson**, Ralph E., P.O. Box 546, Blacksburg, Va. 1939
- Carlson**, Ruth I., 491 State St., Albany, N.Y. 1928
- Carlson**, Valdemar, Antioch Col., Yellow Springs, Ohio. 1936
- Carlton**, Frank T., Case School of Applied Science, Cleveland, Ohio. 1906
- Carmichael**, F. L., Univ. of Denver, Bur. of Bus. and Soc. Res., Denver, Colo. 1940
- Carothers**, Neil, Lehigh Univ., Bethlehem, Pa. 1927
- Carpenter**, Cecil C., Univ. of Kentucky, Col. of Com., Lexington, Ky. 1929
- Carpenter**, Charles G., 9313 Montgomery Ave., North Chevy Chase, Md. 1924
- Carpenter**, O. F., Nat. Mediation Bd., Washington, D.C. 1939
- Carpenter**, Raymond V., 66 Park Ave., New York, N.Y. 1917
- Carpenter**, William M., 272 N. Mountain Ave., Upper Montclair, N.J. 1926
- Carr**, Hobart C., Univ. of Illinois, 318 Com. Bldg., Urbana, Ill. 1939
- Carr**, James A., 1304 Central Nat. Bank Bldg., St. Louis, Mo. 1911
- Carroll**, Dudley D., Chapel Hill, N.C. 1916
- Carroll**, John M., Bates Col., Lewiston, Me. 1913
- Carroll**, Mollie R., 1862 Mintwood Pl., N.W., Washington, D.C. 1922
- Carrothers**, William A., 510 Central Bldg., Victoria, B.C., Canada. 1922
- Carson**, William J., Univ. of Pennsylvania, Logan Hall, Philadelphia, Pa. 1924
- Carter**, Lucian H., Univ. of Kentucky, Col. of Com., Lexington, Ky. 1929
- Carter**, William A., Elm St., Norwich, Vt. 1928
- Carter**, William H., Jr., Univ. of Connecticut, Storrs, Conn. 1930
- Cartinhour**, Gaines T., Hunter Col., 2 Park Ave., New York, N.Y. 1938
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- Case**, Harold C. M., Univ. of Illinois, Dept. of Agric. Econ., Urbana, Ill. 1919
- Caskey**, Wayne F., 2312 S. Nash St., Arlington, Va. 1933
- †Cassel**, Gustav, Djursholm, Sweden. 1929
- Cassels**, John M., Stephens Col., Inst. for Consumer Educa., Columbia, Mo. 1939
- Cassidy**, Harry M., Univ. of California, Dept. of Soc. Welfare, Berkeley, Calif. 1939
- Catlin**, Warren B., Bowdoin Col., Brunswick, Me. 1909
- Cave**, Roy C., San Francisco State Col., Waller and Buchanan Sts., San Francisco, Calif. 1928
- Cavin**, James P., 1301 Vermont Ave., N.W., Washington, D.C. 1940
- Cawthorn**, Delmas R., 216 N. University Ave., Oxford, Ohio. 1939
- Center**, Charles C., Sterling Hall, Madison, Wis. 1938
- Chace**, James E., Jr., Univ. of Florida, Peabody Hall, Gainesville, Fla. 1930
- Chadbourn**, Walter W., Univ. of Maine, Orono, Me. 1939
- Chakerian**, Charles G., Connecticut Col., New London, Conn. 1939
- Chalkley**, H. O., British Embassy, Washington, D.C. 1932
- Chalmers**, Henry, Bur. of For. and Dom. Com., Washington, D.C. 1918
- Chamberlin**, Edward H., 4 Channing St., Cambridge, Mass. 1928
- Chamberlin**, Vell B., 316 Taylor Ave., Glen Ellyn, Ill. 1929

- Chambers, Raymond, Univ. of Buffalo, Edmund Hayes Hall, Buffalo, N.Y. 1922
- Chancellor, William E., Xavier Univ., Col. of Lib. Arts, Cincinnati, Ohio. 1934
- Chandler, Henry A. E., 35 Nassau St., New York, N.Y. 1909
- Chandler, Lester V., Amherst Col., Amherst, Mass. 1939
- Chang, Hsi-Chu, 100 Park St., New Haven, Conn. 1940
- Chapman, Herman H., University, Ala. 1922
- Chapman, John M., Columbia Univ., School of Bus., New York, N.Y. 1920
- Chapman, William P., Jr., 71 Cushman Rd., Scarsdale, N.Y. 1910
- Chase, Charles H., Westchester Apts. 41-B, Washington, D.C. 1916
- Chase, Harvey S., Winter Park, Fla. 1935
- Chawner, Lowell J., 111 W. Leland St., Chevy Chase, Md. 1933
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- Cheney, Coleman B., Skidmore Col., Saratoga Springs, N.Y. 1928
- Cherington, Charles R., 3 Phillips Pl., Cambridge, Mass. 1939
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- Cherrington, Ben M., Univ. of Denver, Found. for Advancement of the Soc. Sci., Denver, Colo. 1936
- Cherrington, Homer, Iowa City, Iowa. 1923
- Cheyney, William J., 583 Clinton Ave., Newark, N.J. 1932
- Chickering, Martha A., State Dept. of Soc. Welfare, Sacramento, Calif. 1931
- Childs, Frank E., Univ. of Minnesota, School of Bus., Minneapolis, Minn. 1936
- Childs, James B., Lib. of Congress, Washington, D.C. 1925
- Chingos, E. George, 59 W. 27th St., New York, N.Y. 1934
- Chinlund, Edwin F., 67 Wall St., New York, N.Y. 1924
- Chisholm, John W., Jr., Box 1106, University, Ala. 1939
- Christenson, Carroll L., Indiana Univ., Dept. of Econ., Bloomington, Ind. 1925
- Christman, F. Lucile, 1805 Erlen Rd., Philadelphia, Pa. 1940
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- Clark, E. Harrison, 1102 Rollins Rd., Columbia, Mo. 1940
- Clark, Fred E., 1602 Ashland Ave., Evanston, Ill. 1914
- Clark, Harold F., Columbia Univ., Box 507, Teachers Col., New York, N.Y. 1930
- Clark, John D., 1100 Randall Ave., Cheyenne, Wyo. 1929
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- Clark, Lawrence, 169 Sylvan Ave., Leonia, N.J. 1921
- *Clark, Martin, 203 Erie County Bank Bldg., Buffalo, N.Y. 1887
- Clark, Ralph N., 32 Longview Dr., Longmeadow, Mass. 1940
- Clark, Robert F., Marietta Col., Marietta, Ohio. 1936
- Clark, Victor S., Lib. of Congress, Washington, D.C. 1906
- Clark, Walter E., Univ. of Nevada, Reno, Nev. 1902
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- Crosby, George R., 7 High Rock Way, Allston, Mass. 1925
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- Davies, Margaret Gay (Mrs. Godfrey), Scripps Col., Claremont, Calif. 1936
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- Davis, Jean S., Wells Col., Aurora, N.Y. 1923
- Davis, Joseph S., 691 Mirada Ave., Stanford University, Calif. 1911
- Davis, Pearce, 24 Sacramento St., Cambridge, Mass. 1937
- Davis, Pierpont V., 63 Wall St., New York, N.Y. 1912
- Davis, Sam W., Ohio State Univ., Dept. of Econ., Columbus, Ohio. 1938
- Davis, Shelby Cullom, Scarborough-on-Hudson, N.Y. 1938
- Davis, William C., 220 Maple St., Reno, Nev. 1939
- Davis, William Z., 21 S. Bentley Ave., Niles, Ohio. 1934
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- Day, Clive, 44 Highland St., New Haven, Conn. 1908
- Day, Edmund E., 27 East Ave., Ithaca, N.Y. 1907
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- Dinic, Carl J., 7075 Flaccus Rd., Ben Avon, Pa. 1926
- Dinwiddie, George S., 317 Baronne St., New Orleans, La. 1940
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- Douglas, Paul H., Univ. of Chicago, Chicago, Ill. 1915
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- Ellove, Joseph T., 4106 4th St., N., Arlington, Va. 1937
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- Fentress, Calvin, 208 S. La Salle St., Chicago, Ill. 1933
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- Ferger, Wirth F., 3110 17th St., N., Arlington, Va. 1935
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- Fernald, Roy L., Winterport, Me. 1932
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- Fleisher, Alexander, P.O. Box 5, Churchville, Pa. 1911
- Fleming, Ralph D., 795 Lancaster St., Albany, N.Y. 1911
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- Flinn, Lawrence, Room 4408, 405 Lexington Ave., New York, N.Y. 1939
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- Foley, Ernest B.**, Boston Col., Chestnut Hill, Mass. 1938
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- Folts, Franklin E.**, Harvard Univ., Grad. School of Bus. Admin., Morgan Hall, Soldiers Field, Boston, Mass. 1929
- Foot, Edmund W.**, 93 Lincoln St., Montclair, N.J. 1928
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- Foster, Philip F.**, 338 W. College Ave., State College, Pa. 1934
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- French, Isabel M.**, 416 W. 118th St., Apt. 43, New York, N.Y. 1940
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Gilson, Mary B., Univ. of Chicago, Dept. of Econ., Chicago, Ill. 1931
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Glaves, Cecil R., Lewis Inst., 1951 W. Madison St., Chicago, Ill. 1937
Glenn, John M., 1 Lexington Ave., New York, N.Y. 1894
Glocker, Theodore W., Univ. of Tennessee, School of Com., Knoxville, Tenn. 1937
Glover, Charles A., 515 Upper Mountain Ave., Upper Montclair, N.J. 1925
Glover, John D., Harvard Univ., Little Hall 11, Cambridge, Mass. 1940
Gluck, Harold, Walton High School, 195th St. and Jerome Ave., Bronx, New York, N.Y. 1935
Goeltz, J. Donald, Univ. of Tennessee, 402 Ayres Hall, Knoxville, Tenn. 1937
Goetz, Billy E., 1756 Cedar Rd., Homewood, Ill. 1936
Goetz, Jacob H., 783 E. 17th St., Brooklyn, N.Y. 1914
Gold, Bela, 3901 N. 4th St., Arlington, Va. 1938
Goldenberg, Leon, 6850 Cornell Ave., Chicago, Ill. 1936
Goldenweiser, Emanuel A., 5914 Cedar Pkwy., Chevy Chase, Md. 1911
Goldhammer, Bernard, 1937 S.E. 42nd Ave., Portland, Ore. 1940
Goldwasser, Betti C., 2212 Eye St., N.W., Washington, D.C. 1938
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Goodbar, Joseph E., Society for Stability in Money and Banking, Inc., 36 W. 44th St., New York, N.Y. 1937
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Grady, Eleanor H. (Mrs.), Hunter Col., Park Ave. and 68th St., New York, N.Y. 1921
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Gras, Norman S. B., Harvard Univ., School of Bus., Soldiers Field, Boston, Mass. 1918
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- Hall, Willard S., 819 Leland Ave., Chicago, Ill. 1929
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- Hamilton, Earl J., Box 4811, Duke Sta., Durham, N.C. 1929
- Hamilton, Edward P., 440 4th Ave., New York, N.Y. 1924
- Hamilton, Frank A., Jr., 4745 Bayard St., Pittsburgh, Pa. 1939
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- Hart, Maurice I., 40 Kensington Ter., Maplewood, N.J. 1939
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- Hayford, F. Leslie, General Motors Corp., 1775 Broadway, New York, N.Y. 1919
- Hayman, Henry H., 8030 St. Martins Lane, Philadelphia, Pa. 1934
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- Healy, James J., Grad. School of Bus. Admin., Baker 211, Soldiers Field, Boston, Mass. 1938
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- Hench, William M., Univ. of Pennsylvania, 209 Bennett Hall, Philadelphia, Pa. 1932
- Henderson, Leon, 2121 Bancroft Pl., N.W., Washington, D.C. 1935
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- Henig, Harry, Univ. of Cincinnati, Cincinnati, Ohio. 1934
- Henry, John M., Coe Col., Cedar Rapids, Iowa. 1923
- Henry, Robert J., 430 S. Lombard Ave., Oak Park, Ill. 1929
- Herbert, Charles H., Sun Life Assurance Co. of Canada, Montreal, Que., Canada. 1937
- Herbst, Alma, 1865 Franklin Ave., Columbus, Ohio. 1924
- Hermens, Ferdinand A., 1721 Stocker Pl., South Bend, Ind. 1938
- Herrmann, Helen, 1620 Fuller St., N.W., Washington, D.C. 1928
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- Hobbs, Franklyn, 208 S. La Salle St., Chicago, Ill. 1920
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- Holmes, Floyd C., 1359 Hudson Ave., Chicago, Ill. 1934
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- Howe, Charles B., 6404 31st Pl., N.W., Washington, D.C. 1924
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- Jackson, Kathleen C., Hollins College, Va. 1927
- Jacobs, Arthur T., 209 N. Ingalls St., Ann Arbor, Mich. 1938
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- Kellogg, Ruth M.**, Lilacstead, Wilton, Conn. 1929
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 Kendrick, M. Slade, 225 Willard Way, Ithaca, N.Y. 1922
 Kennedy, Donald D., MacEvoy Ct., 140 Roseville Ave., Newark, N.J. 1930
 Kennedy, James B., Clinton, S.C. 1935
 Kennedy, Stephen J., 214 Church St., New York, N.Y. 1935
 Kent, Raymond P., 208 Thompson St., Latrobe, Pa. 1934
 Kerby, Jerome L., Trinity Univ., Waxahachie, Tex. 1938
 Kerestesy, Kathrine, 911 7th Ave., New York, N.Y. 1928
 Kerr, Clark, 488 Harvard, Palo Alto, Calif. 1936
 Kerr, Peyton, 1733 20th St., N.W., Washington, D.C. 1938
 Kerry, A. S., Jr., 1117 Federal Ave., Seattle, Wash. 1927
 Kerschbaum, Paul R., 5721 Drexel Ave., Chicago, Ill. 1936
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 Kimball, Milo, Ohio State Univ., Col. of Com. and Admin., Columbus, Ohio. 1921
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 Kindleberger, Charles P., Casinostrasse 14, Basle, Switzerland. 1935
 King, Alan F., 1583 Rose Villa St., Pasadena, Calif. 1935
 King, Everett E., 503 Indiana Ave., Urbana, Ill. 1934
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 Klein, Joseph J., 19 W. 44th St., New York, N.Y. 1909
 Klein, Julius, 2141 Wyoming Ave., N.W., Washington, D.C. 1911
 Klein, Philip, New York School of Soc. Work, 122 E. 22nd St., New York, N.Y. 1936
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- McMahon, Theresa S. (Mrs.), Mercer Island, R.R., Wash. 1913
- McManus, Thomas F., Col. of New Rochelle, New Rochelle, N.Y. 1935
- McMullan, Wilbur N., Montgomery Ave. and Paper Mill Rd., Chestnut Hill, Pa. 1931
- McMurray, Hugh D., 400 Stratmore Ave., Pittsburgh, Pa. 1938
- McNatt, Emmett B., Univ. of Illinois, Urbana, Ill. 1934
- McNaughton, Floyd, 130 Mayfield Ave., N.E., Grand Rapids, Mich. 1923
- McNaughton, Wayne L., Univ. of North Dakota, School of Com., Univ. Sta., Grand Forks, N.D. 1936
- McNeill, Clarence E., Univ. of Nebraska, Lincoln, Neb. 1919
- McPherson, William H., 99 S. Cedar St., Oberlin, Ohio. 1923
- McVey, Frank L., Univ. of Kentucky, Lexington, Ky. 1895
- Mead, Edward S., Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. 1934
- Means, Gardiner C., R. R. 1, Box 43, Vienna, Va. 1926
- Mears, Eliot G., Grad. School of Bus., Stanford University, Calif. 1917
- Meehan, M. Joseph, U. S. Dept. of Com., Bur. of For. and Dom. Com., Washington, D.C. 1940
- Meek, Gertrude P., 707 Tuscan Ave., P.O. Box 710, Hattiesburg, Miss. 1931
- Meek, Howard B., Cornell Univ., Ithaca, N.Y. 1929
- Meek, Wilbur T., 822 S. 67th St., Omaha, Neb. 1938
- Meeker, Royal, 625 Whitney Ave., New Haven, Conn. 1903
- Mehl, Paul, Commodity Exchange Admin., 332 S. La Salle St., Room 1036, Chicago, Ill. 1919
- Melcher, William, 1873 Glencoe Rd., Winter Park, Fla. 1934
- Melder, Frederick E., Clark Univ., Dept. of Econ. and Soc., Worcester, Mass. 1934
- Mendieta, Francisco A., 977 E. 37th St., Brooklyn, N.Y. 1939
- Merchant, Ely O., 122 E. 42nd St., Room 3816, New York, N.Y. 1910
- Meredith, Lewis D., Nat. Life Ins. Co., Montpelier, Vt. 1929
- Merhoff, Richard H., 1355 W. 31st St., Chicago, Ill. 1940
- Meriam, Richard S., Harvard Bus. School, Soldiers Field, Boston, Mass. 1914
- Merrill, Ezra, 500 Rutherford Ave., Boston, Mass. 1938
- Metzger, Charles R., Asso. of Motion Picture Producers, Inc., 5504 Hollywood Blvd., Hollywood, Calif. 1929
- Meyer, Balthasar H., 3327 P St., N.W., Washington, D.C. 1889
- Meyer, Carl, 231 S. La Salle St., Chicago, Ill. 1918
- *Meyer, Eugene, Jr., 1624 Crescent Pl., Washington, D.C. 1910
- Meyers, Albert L., Apt. 242, Arlington Village, Arlington, Va. 1930
- Meyrowitz, Alvin, 731 W. 183rd St., New York, N.Y. 1940
- Michels, Rudolf K., 18 Vanderbilt Rd., Scarsdale, N.Y. 1929
- Micoleau, Henri L., General Motors Corp., 1775 Broadway, New York, N.Y. 1935
- Mighell, Albert T., 2747 N. 55th St., Milwaukee, Wis. 1925

- Mikesell**, Raymond F., Univ. of Washington, Col. of Econ. and Bus., Seattle, Wash. 1936
- Mikkelsen**, Michael A., R.R. 2, Danbury, Conn. 1910
- Mikoljon**, Stanley J., 182 Columbia Ave., Passaic, N.J. 1933
- Milam**, Paul W., Univ. of Arkansas, Col. of Bus. Admin., Fayetteville, Ark. 1940
- Miles**, J. Royce, 1012 Jackson, Monroe, La. 1940
- Miller**, Adolph C., 2230 S St., N.W., Washington, D.C. 1901
- Miller**, Benjamin O., Virginia Poly. Inst., Blacksburg, Va. 1938
- Miller**, Edmund T., Univ. Sta., Austin, Tex. 1909
- Miller**, Edward T., Jr., 617 Wilson Dr., Albion, Mich. 1937
- Miller**, Glenn W., Univ. of Toledo, Toledo, Ohio. 1936
- Miller**, Henry S., 57 Charles St., New York, N.Y. 1936
- Miller**, J. Don, Jr., 619 9th St., Columbus, Ind. 1940
- Miller**, John L., 24 Grand Ave., Madison, Wis. 1939
- Miller**, John P., 203 Sheffield Hall, New Haven, Conn. 1936
- Miller**, John W., Montgomery Ward and Co., Chicago, Ill. 1939
- Miller**, Paul L., 2414 Ridge Rd. Dr., Alexandria, Va. 1924
- Miller**, Sidney L., Univ. of Iowa, Col. of Com., Iowa City, Iowa. 1920
- Miller**, Stanley L., 736 W. End Ave., New York, N.Y. 1939
- Miller**, Taulman A., 507 S. Highland Ave., Bloomington, Ind. 1936
- Millikan**, Max F., 1285 Boulevard, Apt. 46, New Haven, Conn. 1937
- Millis**, Harry A., Univ. of Chicago, Faculty Exchange, Chicago, Ill. 1895
- Mills**, Frederick C., Columbia Univ., New York, N.Y. 1920
- Mills**, Mark C., Indiana Univ., Dept. of Econ., Bloomington, Ind. 1923
- Miner**, Edward G., Pfaudler Co., Rochester, N.Y. 1914
- Minor**, Milton C., Farmers Nat. Bank, Danville, Ky. 1930
- Mints**, Lloyd W., Univ. of Chicago, Box 237 Faculty Exchange, Chicago, Ill. 1922
- Mirkowich**, Nicholas, Univ. of California, Dept. of Econ., Berkeley, Calif. 1940
- Mises**, Ludwig, 3, av. Dumas, Geneva, Switzerland. 1924
- Mitch**, George F., 511 E. Hamilton Ave., State College, Pa. 1926
- Mitchell**, Agnes W., 240 E. End Ave., Beaver, Pa. 1934
- Mitchell**, Broadus, Occidental Col., Los Angeles, Calif. 1921
- Mitchell**, George S., 3838 Dittman Rd., Arlington, Va. 1931
- Mitchell**, George W., 5453 Woodlawn Ave., Chicago, Ill. 1930
- Mitchell**, Harry A., Tulane Univ., New Orleans, La. 1933
- Mitchell**, Hugh C., Jr., 3038 Newark St., N.W., Washington, D.C. 1932
- Mitchell**, James M., 70 Oakland Pl., Buffalo, N.Y. 1914
- Mitchell**, Waldo F., 1508 N. 7th St., Terre Haute, Ind. 1920
- *Mitchell**, Wesley C., 161 W. 12th St., New York, N.Y. 1903
- Mittelman**, Edward B., 2032 Belmont Rd., N.W., Washington, D.C. 1920
- Modlin**, George M., University of Richmond, Va. 1940
- Moe**, Floyd B., Virginia Junior Col., Virginia, Minn. 1935
- Moffat**, James E., 925 E. Hunter Ave., Bloomington, Ind. 1915
- Mogilnitsky**, Theodosi A., Loyola Univ., 6525 Sheridan Rd., Chicago, Ill. 1935
- Moloney**, John F., Nat. Cottonseed Products Asso., 1913 Sterick Bldg., Memphis, Tenn. 1938
- Monchow**, Helen C., 337 E. Chicago Ave., Chicago, Ill. 1929
- Monrad**, Oscar, Chamber of Com., 152 Temple St., New Haven, Conn. 1939
- Monroe**, Arthur E., D21 Kirkland House, Cambridge, Mass. 1915
- Monroe**, Day, Bur. of Home Econ., Washington, D.C. 1926
- Montague**, Gilbert H., 152 E. 37th St., New York, N.Y. 1926
- Montgomery**, R. H., Univ. of Texas, Austin, Tex. 1939
- Montgomery**, Royal E., Cornell Univ., Dept. of Econ., Ithaca, N.Y. 1931
- Moonitz**, Maurice, Univ. of Santa Clara, Col. of Bus. Admin., Santa Clara, Calif. 1935
- Moore**, Charles W., Glen Rd., Wellesley Farms, Mass. 1939
- Moore**, Floyd W., Western State Teachers Col., Kalamazoo, Mich. 1927
- Moore**, Henry L., Cornwall, N.Y. 1896
- Moore**, Justin H., Col. of City of New York, 17 Lexington Ave., New York, N.Y. 1920
- Moore**, W. J., Richmond, Ky. 1934
- Moore**, William H., 1701 Massachusetts Ave., N.W., Washington, D.C. 1934
- Moorhouse**, Llewellyn A., State Agric. Col., Fort Collins, Colo. 1922
- Morehouse**, Edward W., 101 Ely Pl., Madison, Wis. 1925

- Morgan, Charles S., 5721 Chevy Chase Pkwy., Washington, D.C. 1917
- Morgan, George A., Room 1649, 122 S. Michigan Ave., Chicago, Ill. 1940
- Morgan, Gerald, Hyde Park, N.Y. 1920
- *Morgan, John P., 23 Wall St., New York, N.Y. 1913
- Morgan, Julian D., 411 W. Nevada, Urbana, Ill. 1938
- Morgan, Lorne T., Univ. of Toronto, Dept. of Polit. Sci., Toronto 5, Ont., Canada. 1932
- Morgan, Ora S., Columbia Univ., School of Bus., New York, N.Y. 1933
- Moriarty, John S., 111 U. S. Customhouse, San Francisco, Calif. 1938
- Morrill, Chester, Fed. Res. Bd., Washington, D.C. 1924
- Morris, Bruce R., 40 S. Wade, Washington, Pa. 1935
- Morris, Homer L., Plush Mill Rd., Wallingford, Pa. 1933
- Morris, Maxwell H., 460 E. 15th Ave., Eugene, Ore. 1938
- Morris, Victor P., Univ. of Oregon, Col. of Soc. Sci., Eugene, Ore. 1926
- Morris, Walter S., 732 14th Ave., Patterson, N.J. 1939
- Morrison, Jay, 1221 Third Ave., W., Seattle, Wash. 1935
- Morrison, Loyle A., 1616 S. Lynn St., Arlington, Va. 1923
- Morrison, Paul L., 2115 Central Park Ave., Evanston, Ill. 1928
- Morrison, Vernon G., 182 Oak Rd., Box 174, Norris, Tenn. 1936
- Morrow, Curtis H., 3 West Ct., Waterville, Me. 1922
- Morse, Herbert C., 531 W. 122nd St., Apt. A-11, New York, N.Y. 1940
- Morse, Hermann C., 1335 W. Hollywood Ave., Chicago, Ill. 1929
- Morson, William T., Box 13, Atlantic Beach, N.Y. 1937
- *Morss, John W., Room 618, 201 Devonshire St., Boston, 9, Mass. 1909
- Morss, Noel, 568 South St., Needham, Mass. 1933
- Mortenson, William P., Univ. of Wisconsin, Dept. of Agric. Econ., Madison, Wis. 1935
- Morton, Joseph E., Knox Col., Dept. of Econ., Galesburg, Ill. 1936
- Morton, Walter A., Univ. of Wisconsin, Sterling Hall, Madison, Wis. 1928
- Mosak, Jacob L., Univ. of Chicago, Dept. of Econ., Chicago, Ill. 1940
- Mosk, Sanford A., Univ. of California, Dept. of Econ., Berkeley, Calif. 1936
- Moulton, Harold G., Brookings Inst., 722 Jackson Pl., Washington, D.C. 1911
- Mowbray, Albert H., Univ. of California, 119 South Hall, Berkeley, Calif. 1924
- Mucha, Frank A., F.H.A., New P. O. Bldg., Los Angeles, Calif. 1940
- Mudge, Edmund W., 1000 Morewood Ave., Pittsburgh, Pa. 1934
- Mudgett, Bruce D., Univ. of Minnesota, Minneapolis, Minn. 1918
- Mueller, Frederick W., Jr., DePaul Univ., School of Com., 64 E. Lake St., Chicago, Ill. 1935
- Mulliken, Otis E., 3726 Connecticut Ave., Washington, D.C. 1939
- Mund, Vernon A., Univ. of Washington, Dept. of Econ., Seattle, Wash. 1929
- Muntz, Earl E., New York Univ., School of Com., Washington Sq., New York, N.Y. 1923
- Murchison, Claudius T., Cotton-Textile Inst., 320 Broadway, New York, N.Y. 1928
- Murdoch, Arthur E., 115 Evans Ave., Alamo Heights, San Antonio, Tex. 1911
- Murphy, Henry, U. S. Treasury Dept., Div. of Res. and Statis., Washington, D.C. 1926
- Murphy, Mary E., 106 Morningside Dr., New York, N.Y. 1935
- Murray, Evan B., Utah State Agric. Col., School of Com., Logan, Utah. 1940
- Murray, Merrill G., 6607 Delfield St., Chevy Chase, Md. 1933
- Murray, William G., Iowa State Col., Dept. of Agric. Econ., Ames, Iowa. 1927
- Musgrave, Richard A., 117 Fresh Pond Pkwy., Cambridge, Mass. 1937
- Myers, A. Howard, 294 Washington St., Boston, Mass. 1931
- Myers, Charles A., Box 98, Framingham, Mass. 1936
- Myers, Howard B., 426 S. Lee St., Alexandria, Va. 1927
- Myers, Robert J., U. S. Dept. of Labor, Children's Bur., Washington, D.C. 1934
- Myers, Walter R., Univ. of Minnesota, 103 School of Bus., Minneapolis, Minn. 1922
- Nadler, Marcus, New York Univ., 90 Trinity Pl., New York, N.Y. 1924
- Nahl, Perham C., Oklahoma A. and M. Col., School of Com., Stillwater, Okla. 1936
- Nathan, Otto, 132 W. 11th St., New York, N.Y. 1931
- Nathan, Robert R., U. S. Dept. of Com., Bur. of For. and Dom. Com., Div. of Econ., Washington, D.C. 1937
- Nathanson, Nathan L., 1000 Montgomery St., Brooklyn, N.Y. 1940
- Nef, John U., Univ. of Chicago, Chicago, Ill. 1929
- Neff, Frank A., Univ. of Wichita, Wichita, Kan. 1935
- Neifeld, Morris R., 15 Washington St., Newark, N.J. 1924

- Neisser, Hans P., 227 Kenyon Ave., Swarthmore, Pa. 1933
- Neiswanger, William A., Jr., Univ. of Illinois, Dept. of Econ., Urbana, Ill. 1924
- Nelson, Alf W., U. S. Maritime Com., Div. of Res., Washington, D. C. 1937
- Nelson, Carl L., Kansas State Col., Dept. of Econ., Manhattan, Kan. 1934
- Nelson, Edward G., Stanford University, Calif. 1938
- Nelson, El Roy, Univ. of Denver, Denver, Colo. 1935
- Nelson, James C., The Warwick, Apt. 201, 3051 Idaho Ave., N.W., Washington, D.C. 1936
- Nelson, Peter, A. and M. Col., Stillwater, Okla. 1929
- Nelson, Richard W., U. S. Forest Service, Forest Taxation Inquiry, Washington, D.C. 1922
- Nelson, Saul, U. S. Dept. of Labor, Bur. of Labor Statis., Washington, D.C. 1939
- Nerlove, Samuel H., Univ. of Chicago, School of Com., Chicago, Ill. 1923
- Newbury, Frank D., Westinghouse Electric and Manufacturing Co., East Pittsburgh, Pa. 1937
- Newcomer, Mabel, Vassar Col., Poughkeepsie, N.Y. 1915
- Newlove, George H., Univ. of Texas, School of Bus. Admin., Austin, Tex. 1914
- Newman, Clarence W., 111 N. 5th St., Richmond, Va. 1931
- Newman, William H., Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. 1939
- Newton, James Q., P.O. Box 1559, Denver, Colo. 1933
- Nichol, Archibald J., Univ. of California, Berkeley, Calif. 1935
- Nicholls, William D., Univ. of Kentucky, Col. of Agric., Lexington, Ky. 1929
- Nicholson, Charles M., 17 Montrose Ave., Garrett Park, Md. 1929
- Niehaus, Fred R., Univ. of Colorado, School of Bus., Boulder, Colo. 1935
- Nieler, William A., Box 1568, Univ. of Texas, Austin, Tex. 1939
- Nielsen, Axel, Vilhelm Smidts Vej 7, Gentofte, Denmark. 1929
- Nielsen, Oswald, 101 Jackson Ave., Univ. Pk., Hyattsville, Md. 1929
- Nightingale, Edmund A., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. 1936
- Nilsson, Arthur E., 166 S. Cedar St., Oberlin, Ohio. 1927
- Nixon, Russell A., 30 Landon St., Cambridge, Mass. 1940
- Noble, Clarence V., Univ. of Florida, Agric. Exper. Sta., Gainesville, Fla. 1919
- Noetzel, Arthur J., 2015 Orrington Ave., Evanston, Ill. 1940
- Noetzel, Grover A. J., Temple Univ., Dept. of Econ., Philadelphia, Pa. 1934
- Nolen, Russell M., Univ. of Illinois, Urbana, Ill. 1931
- Nordstrom, Oscar L., Augustana Col., Rock Island, Ill. 1937
- Norman, Charles B., Col. of the Pacific, Stockton, Calif. 1938
- Normano, John F., 148 Elgin St., Newton Centre, Mass. 1931
- Norris, Nilan, 2800 University Ave., New York, N.Y. 1936
- Nortman, P. Bernard, 230 W. 107th St., New York, N.Y. 1938
- Norton, John D., 104 Scotland Rd., South Orange, N.J. 1939
- Norton, Thomas L., Univ. of Buffalo, Crosby Hall, Buffalo, N.Y. 1925
- Nourse, Edwin G., Brookings Inst., 722 Jackson Pl., Washington, D.C. 1911
- Noyes, C. Reinold, 455 E. 51st St., New York, N.Y. 1930
- Noyes, Guy E., 2710 Yale Sta., New Haven, Conn. 1935
- Nugent, Rolf, Russell Sage Found., 130 E. 22nd St., New York, N.Y. 1936
- Nulsen, Robert H., 9910 Robbins Dr., Beverly Hills, Calif. 1938
- Nunn, William L., Univ. of Newark, Newark, N.J. 1937
- Nussbaum, Hans, 1142 49th St., Brooklyn, N.Y. 1939
- Nystrom, Paul H., Columbia Univ., School of Bus., New York, N.Y. 1924
- Oakes, Eugene E., 421 Whitney Ave., New Haven, Conn. 1931
- Oakley, Cyrus K., 615 Ida Ave., Fayetteville, Ark. 1937
- Obana, Tsutomu, Japanese Chamber of Com., 549 Market St., San Francisco, Calif. 1924
- O'Connell, Donald W., Columbia Univ., 920 Hartley Hall, New York, N.Y. 1940
- O'Connor, J. Michael, 1731 Eye St., N.W., Washington, D.C. 1934
- O'Connor, Walter J., 4728 46th St., N.W., Washington, D.C. 1937
- O'Donnell, Al F., Marlyn Apts., Cathedral Ave. at 39th St., Washington, D.C. 1937
- O'Donnell, Cyril, 64 E. Lake St., Chicago, Ill. 1929
- Oehler, Christian, 660 Glen Ave., Westfield, N.J. 1935
- Ogburn, William F., Univ. of Chicago, Chicago, Ill. 1911
- O'Grady, John, 1317 F St., N.W., Washington, D.C. 1916
- Ohlin, Bertil G., Handelshogskolan, Stockholm, Sweden. 1937

Ohlso, John
York, N.
O'Leary, J.
Roxbury
O'Leary, P.
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Oliver, Cl
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Oliver, E. L.
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Olsen, Herl
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Olson, Albe
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Olson, Oscar
Kan. 1940
Omohundro
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O'Neil, Leo
Boston, M
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Opie, Redve
D.C. 1926
Orchard, Jo
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Ormes, Ferg
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Ortega, Virg
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Osborn, Willi
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tto, Erich A.

List of Members

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Obsol, Johann G., 1815 Riverside Dr., New York, N.Y. 1913
 O'Leary, Joseph M., 15 Chesbrough Rd., West Roxbury, Mass. 1937
 O'Leary, Paul M., 37 Barton Pl., Ithaca, N.Y. 1929
 Oliver, Clifton, Jr., 1911 Oleander, Apt. 2, Baton Rouge, La. 1940
 Oliver, E. L., 5361 Conduit Rd., N.W., Washington, D.C. 1928
 Oliver, Henry M., Jr., 2843 Yale Sta., New Haven, Conn. 1938
 O'Loughlin, William, 264 Henry St., New York, N.Y. 1939
 Olsen, Herluf V., Dartmouth Col., Tuck School, Hanover, N.H. 1924
 Olsen, Nils A., Equitable Life Assurance Society, 393 7th Ave., New York, N.Y. 1930
 Olson, Albert L., 749 12th Ave., Huntington, W.Va. 1937
 Olson, Emery E., 3551 University Ave., Los Angeles, Calif. 1922
 Olson, Oscar A., 1301 E. Euclid St., McPherson, Kan. 1940
 Omohundro, Edgar H., 455 Delafield Pl., N.W., Washington, D.C. 1940
 O'Neil, Leo D., Commonwealth at Granby St., Boston, Mass. 1939
 O'Neill, Harry J., St. Louis Univ., School of Com. and Fin., St. Louis, Mo. 1928
 Osterhous, Lawrence A., State Teachers Col., Dept. of Econ., Oshkosh, Wis. 1940
 Opie, Redvers, British Embassy, Washington, D.C. 1926
 Orchard, John E., Columbia Univ., School of Bus., New York, N.Y. 1940
 Ormes, Ferguson R., Wabash Col., Crawfordsville, Ind. 1940
 Ortega, Virgilio, P.O. Box 812, Havana, Cuba. 1932
 Orten, Maurice D., Univ. of Missouri, School of Mines and Metallurgy, Rolla, Mo. 1924
 Orton, William A., 53 Harrison Ave., Northampton, Mass. 1922
 Osborn, William C., 20 Exchange Pl., New York, N.Y. 1910
 Osborne, Ernest L., Biarritz Apts., 121 Ward Pkwy., Kansas City, Mo. 1934
 Osgood, Roy C., First National Bank, 38 S. Dearborn St., Chicago, Ill. 1904
 O'Shea, Vincent J., 260 Arleigh Rd., Douglas Manor, L.I., N.Y. 1932
 O'Sias, Max S., 373 N. Glebe Rd., Arlington, Va. 1940
 Ostlund, Harry J., Univ. of Minnesota, School of Bus., Minneapolis, Minn. 1920
 Ostrolenko, Bernhard, Col. of City of New York, 17 Lexington Ave., New York, N.Y. 1940
 Otto, Erich A., 431 Grand Ave., Leonia, N.J. 1931

Owen, William V., Purdue Univ., Dept. of Hist., Econ., and Gov., Lafayette, Ind. 1939
 Owens, Richard N., George Washington Univ., Washington, D.C. 1923
 Pabst, William R., Jr., Tulane Univ., Dept. of Econ., New Orleans, La. 1932
 Packard, Richard M., 143 Park Dr., Boston, Mass. 1936
 Pagani, John, Jr., Univ. of Santa Clara, Santa Clara, Calif. 1939
 Page, Anne (Mrs.), Chocorua, N.H. 1936
 §Page, Atwood C., 314 Collins St., Hartford, Conn. 1912
 Palmer, Dwight L., Massachusetts Inst. of Tech., Dept. of Econ. and Soc. Sci., Cambridge, Mass. 1940
 Palmer, Edgar Z., Univ. of Kentucky, Col. of Com., Lexington, Ky. 1927
 Palmer, Gladys L., Univ. of Pennsylvania, 3440 Walnut St., Philadelphia, Pa. 1920
 Palmer, Walter S., Jr., 201 State St., Reno, Nev. 1934
 Palmer, William B., Univ. of Michigan, Dept. of Econ., Ann Arbor, Mich. 1934
 Palyi, Melchior, 211 W. Wacker Dr., Chicago, Ill. 1927
 Pancoast, Elinor, Goucher Col., Baltimore, Md. 1923
 Paris, James D., 83 Old Pond Rd., Great Neck, N.Y. 1935
 Parker, Barrington D., Dillard Univ., New Orleans, La. 1939
 Parker, James S., 2326 S. 15th St., Sheboygan, Wis. 1936
 Parmelee, Julius H., Bur. of Railway Econ., Washington, D.C. 1917
 Parmelee, Rexford C., 4700 47th St., N.W., Washington, D.C. 1931
 Parrish, John B., Southern Illinois State Normal Univ., Dept. of Econ., Carbondale, Ill. 1937
 Parrott, D'Arcy, 1 Wall St., New York, N.Y. 1940
 §Parry, Carl E., Fed. Res. Bd., Div. of Security Loans, Washington, D.C. 1910
 Parry, Corliss L., Marvin Ridge Rd., New Canaan, Conn. 1935
 Parsons, Kenneth H., Univ. of Wisconsin, 304 Agric. Hall, Madison, Wis. 1937
 Parsons, Oswald A., Montana State Col., Agric. Exper. Sta., Bozeman, Mont. 1939
 Paschal, Elizabeth, Apt. 201, 2627 Lee Highway, Arlington, Va. 1934
 Pasel, Lawrence, 3 College St., Canton, N.Y. 1924
 Pasvolsky, Leo, U.S. Dept. of State, Washington, D.C. 1939
 Paton, William A., 2023 Day St., Ann Arbor, Mich. 1917

- Patterson, Ernest M.**, Univ. of Pennsylvania, Philadelphia, Pa. 1912
- Patterson, Grace F.**, 404 S. 47th St., Philadelphia, Pa. 1934
- Patterson, John H.**, Middlebury Col., Middlebury, Vt. 1935
- Patterson, S. Howard**, Univ. of Pennsylvania, Logan Hall, Philadelphia, Pa. 1921
- Pattillo, Nathan A., Jr.**, Men's Dormitory, Canton, N.Y. 1929
- Patton, Francis L.**, Hamilton Col., Clinton, N.Y. 1920
- Patton, Harold S.**, Michigan State Col., Dept. of Econ., East Lansing, Mich. 1923
- Patton, Robert D.**, Ohio State Univ., Columbus, Ohio. 1927
- Paustian, Paul W.**, Stephens Col., Columbia, Mo. 1929
- Payne, W. E.**, 1200 W. Euclid Ave., Indianola, Iowa. 1922
- Pearce, C. A.**, 2700 Que St., N.W., Washington, D.C. 1933
- Pearson, Frank A.**, Cornell Univ., Ithaca, N.Y. 1924
- Peck, Gustav**, 6807 Oak Lane, Chevy Chase, Md. 1932
- Peck, Harvey W.**, 305 Comstock Ave., Syracuse, N.Y. 1922
- Peck, Millard, U. S.** Dept. of Agric., 613 Terminal Bldg., Lincoln, Neb. 1940
- Pegrum, Dudley F.**, Univ. of California, Los Angeles, Calif. 1928
- Peirce, Paul S.**, 139 Morgan St., Oberlin, Ohio. 1910
- Peisch, Archie M.**, Norwich, Vt. 1919
- Peixotto, Jessica B.**, 2728 Claremont Blvd., Berkeley, Calif. 1909
- Pelz, Edward J.**, 18 Mount Joy Ave., Scarsdale, N.Y. 1938
- Percefull, Sabin C.**, Northeastern Junior Col., Miami, Okla. 1921
- Perlman, Benjamin**, 947 Montgomery St., Brooklyn, N.Y. 1931
- Perlman, Selig**, 1805 Rowley Ave., Madison, Wis. 1915
- Person, Harlow S.**, Southlawn Ave., Dobbs Ferry, N.Y. 1901
- Person, Walter A.**, Forest City, Iowa. 1940
- Persons, Charles E.**, 4105 Fessenden St., N.W., Washington, D.C. 1910
- Peter, Raymond J.**, 137 Roseville Ave., Newark, N.J. 1940
- Peters, Iva L. (Mrs.)**, Fishkill, N.Y. 1922
- Petersen, Elmore**, Univ. of Colorado, Univ. Exten. Div., Boulder, Colo. 1930
- Peterson, Florence**, Bur. of Labor Statis., Washington, D.C. 1934
- Peterson, Florence B. (Mrs.)**, 687 Lincoln Ave., Winnetka, Ill. 1928
- Peterson, G. Shorey**, Univ. of Michigan, Dept. of Econ., Ann Arbor, Mich. 1924
- Peterson, J. Marvin**, Miami Univ., Oxford, Ohio. 1932
- Peterson, Mary S. (Mrs.)**, 304 Princeton Ave., Madison, Wis. 1920
- Peterson, Rudolph**, 129 S. 13th St., Lewisburg, Pa. 1925
- Pettee, James C.**, Univ. of Kansas, School of Bus., Lawrence, Kan. 1936
- Pettengill, Robert B.**, Univ. of Southern California, Dept. of Econ., Los Angeles, Calif. 1934
- Pettet, Zellmer R.**, Bur. of the Census, Div. of Agric., Washington, D.C. 1940
- Phelps, Clyde W.**, Univ. of Chattanooga, Chattanooga, Tenn. 1927
- Phelps, Dudley M.**, Univ. of Michigan, 111 Tappan Hall, Ann Arbor, Mich. 1939
- Phelps, Esmond**, 321 St. Charles St., New Orleans, La. 1911
- Phelps, Harold A.**, American Sociological Society, Univ. of Pittsburgh, Pittsburgh, Pa. 1936
- Phelps, Vernon L.**, 1725 17th St., N.W., Washington, D.C. 1937
- Phillips, Chester A.**, 721 N. Linn St., Iowa City, Iowa. 1915
- Phillips, Edmund J., Jr.**, Room 2000, 105 W. Adams St., Chicago, Ill. 1939
- Phillips, Merton O.**, Washington and Lee Univ., Lexington, Va. 1927
- Phillips, Stanley A.**, 490 Sheridan Rd., Evanston, Ill. 1937
- Phillips, William J., Jr.**, Clarkson Col. of Tech., Potsdam, N.Y. 1938
- Phinney, Josiah T.**, 122 McCartney St., Easton, Pa. 1931
- Phipps, Irving R.**, 255 Park Ave., Munsey Park, Manhasset, L.I., N.Y. 1929
- *Phipps, Lawrence C.**, 610 Denver Nat. Bldg., Denver, Colo. 1901
- Pickett, Ralph R.**, 1301 Walnut St., Emporia, Kan. 1925
- Pierson, Frank**, 106 Morningside Dr., New York, N.Y. 1940
- Pierson, John H. G.**, 121 E. 40th St., New York, N.Y. 1934
- †Pigon, Arthur C.**, King's Col., Cambridge, England. 1922
- Pike, Eugene R.**, 2430 Lake View Ave., Chicago, Ill. 1916
- Pillion, Joseph C.**, Miami Univ., Oxford, Ohio. 1937
- Pinchbeck, Raymond B.**, Univ. of Richmond, Richmond, Va. 1923
- Piper, Clarence R.**, 2195 Orlando Rd., Pasadena, Calif. 1921
- Piquet, Howard S.**, U. S. Tariff Com., 8th and E St., N.W., Washington, D.C. 1927

List of Members

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Pitigliani, Fausto R., 97 Ft. Washington Ave., New York, N.Y. 1938
 Pitt, Courtney H., 405 Lexington Ave., New York, N.Y. 1936
 Platt, Edmund, Marine Midland Group, Inc., 120 Broadway, New York, N.Y. 1933
 Plowman, E. Grosvenor, 745 Steele St., Denver, Colo. 1922
 Plum, Lester V., 48 Vandeventer St., Princeton, N.J. 1940
 Plumley, Alden J., Univ. of Nevada, Dept. of Econ., Reno, Nev. 1928
 Plummer, Wilbur C., Univ. of Pennsylvania, 209 Bennett Hall, Philadelphia, Pa. 1925
 Pogue, Joseph E., 18 Pine St., New York, N.Y. 1924
 Pohly, Claire, c/o Besancon, 10 bis, Boulevard des Tranchees, Geneva, Switzerland. 1939
 Poindexter, Carl, Carson Newman Col., Jefferson City, Tenn. 1939
 Poindexter, William G., Jr., 409 River Rd., Greenwood, Miss. 1937
 Pollard, George M., 15 William St., Room 800, New York, N.Y. 1938
 Pollock, Frederick, Int. Inst. of Soc. Res., 429 W. 117th St., New York, N.Y. 1934
 Pollock, Kenneth W., 751 S. National Ave., Ft. Scott, Kan. 1933
 Pond, A. Smith, Brigham Young Univ., Provo, Utah. 1938
 Pond, Addison, Univ. of Vermont, Burlington, Vt. 1939
 Poole, Kenyon E., Brown Univ., Dept. of Econ., Providence, R.I. 1937
 Potter, Helen, Western Col., Dept. of Soc. Sci., Oxford, Ohio. 1938
 Powell, Leona M., 315 E. 68th St., New York, N.Y. 1926
 Powell, Oliver S., Fed. Res. Bank, Minneapolis, Minn. 1927
 Powell, Weldon, 1003 Pacific Mutual Bldg., Los Angeles, Cal. 1924
 Powers, Carroll M., 315 Hackberry Ave., Modesto, Calif. 1932
 Prather, Charles L., Syracuse Univ., 106 Slocum Hall, Syracuse, N.Y. 1931
 Prehn, Edward C., Jr., 429 Clove Rd., West New Brighton, S.I., N.Y. 1937
 Preinreich, Gabriel A. D., 17 E. 42nd St., New York, N.Y. 1940
 Prentice, James S., Middlebury Col., Middlebury, Vt. 1935
 Presser, Isaac, 100 Van Cortlandt Park S., Bronx, New York, N.Y. 1940
 Preston, Howard H., 5026 15th Ave., N.E., Seattle, Wash. 1918
 Preston, Stanley W., Box 3415, University, La. 1933
 Prewitt, Roy A., 114 Eddy St., Ithaca, N.Y. 1940

Pribram, Karl, 3625 16th St., Washington, D.C. 1939
 Price, Galen B., Jr., Univ. of Arkansas, Col. of Bus. Admin., Fayetteville, Ark. 1940
 Price, H. Bruce, Univ. of Kentucky, Dept. of Markets and Rur. Fin., Lexington, Ky. 1918
 Prime, John H., New York Univ., School of Com., Washington Sq., New York, N.Y. 1925
 Prior, Joseph H., Bd. of Educa., 228 N. LaSalle St., Chicago, Ill. 1912
 Pruefer, Clifford H., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. 1939
 Puckett, Erastus P., Central Col., Fayette, Mo. 1935
 Purdy, Harry L., Dartmouth Col., Hanover, N.H. 1939
 Pyle, Hugh G., Pennsylvania State Col., Exten. Services, State College, Pa. 1931
 Pyle, John F., 1217 W. Wisconsin Ave., Milwaukee, Wis. 1926
 Pymm, J. Donald, Fresno State Col., Fresno, Calif. 1939
 Quirin, E. Lafayette, 29 Boulevard Rd., Wellesley Hills, Mass. 1940
 Ramsperger, H. G., 400 Allaire Ave., Leonia, N.J. 1922
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 Randall, Ernest F., 2715 Cortland Pl., Washington, D.C. 1937
 Randolph, E. F., 993 Memorial Dr., Cambridge, Mass. 1890
 Rankin, John O., Steele, Mo. 1937
 Ransom, William L., 33 Pine St., New York, N.Y. 1924
 Raper, Charles L., 700 Ackerman Ave., Syracuse, N.Y. 1902
 Rapp, Robert E., 2308 N. Broadway, Knoxville, Tenn. 1937
 *Rappard, William E., Valavran, near Geneva, Switzerland. 1911
 Ratchford, Benjamin U., 4727 Duke Sta., Durham, N.C. 1929
 Ratcliff, Richard U., Univ. of Michigan, 208 Tappan Hall, Ann Arbor, Mich. 1935
 Ratner, Sidney, 121 Joralemon St., Brooklyn, N.Y. 1939
 Ratzlaff, Carl J., Lafayette Col., Dept. of Econ., Easton, Pa. 1932
 Raushenbush, Carl, New York Univ., Washington Square Col., New York, N.Y. 1931
 Raushenbush, Paul A., 2228 Hillington Green, Madison, Wis. 1923
 Raver, Paul J., 811 N. E. Oregon St., Portland, Ore. 1933
 Raymaker, Constance L., Ripon Col., Ripon, Wis. 1929

- Raymond**, Fairfield E., 28 Meadow Way, Cambridge, Mass. 1930
- Raynes**, George W., 209 Miller Ave., Portsmouth, N.H. 1914
- Rea**, L. Owens, Wake Forest Col., Wake Forest, N.C. 1931
- Read**, Leonard E., Los Angeles Chamber of Com., 1151 S. Broadway, Los Angeles, Calif. 1937
- Reddick**, Olive I., Hood Col., Frederick, Md. 1930
- Redlich**, Fritz L., Mercer Univ., Macon, Ga. 1937
- Redpath**, John M., R.F.D. 3, Rockville, Md. 1924
- Reed**, Harold L., 422 Cayuga Heights Rd., Ithaca, N.Y. 1912
- Reedy**, Theodore W., 222 N. Thomas St., Arlington, Va. 1940
- Reeve**, Joseph E., 3419 Carpenter St., S.E., Washington, D.C. 1931
- Reeve**, Virginia D. (Mrs.), 106 3rd St., N.E., Washington, D.C. 1940
- Reich**, Joseph, 1675 Grand Concourse, Bronx, New York, N.Y. 1940
- Reich**, Nathan, 385 Central Park W., New York, N.Y. 1936
- Reid**, Margaret G., Iowa State Col., Ames, Iowa. 1932
- Reiersson**, Roy L., Bankers Trust Co., 16 Wall St., New York, N.Y. 1929
- Reighard**, John J., Univ. of Minnesota, School of Bus., Minneapolis, Minn. 1915
- Reilly**, Edward E., Univ. of Western Ontario, London, Ont., Canada. 1936
- Reiner**, James, 110 Patterson Ave., Greenwich, Conn. 1936
- Reinhardt**, John F., 15 W. 10th St., Kansas City, Mo. 1939
- Remer**, Charles F., Univ. of Michigan, Dept. of Econ., Ann Arbor, Mich. 1923
- Renne**, Roland R., Montana State Col., Bozeman, Mont. 1931
- Reynolds**, Lloyd G., Johns Hopkins Univ., Dept. of Polit. Econ., Baltimore, Md. 1937
- Rhodes**, Edward E., 300 Broadway, Newark, N.J. 1923
- Rice**, Lloyd P., 65 Lebanon St., Hanover, N.H. 1915
- Rice**, Stuart A., Cosmos Club, Washington, D.C. 1929
- Rich**, Chester L., Cornell Col., Mt. Vernon, Iowa. 1937
- Richards**, Cecil S., Univ. of the Witwatersrand, P. O. Box 1176, Johannesburg, South Africa. 1932
- Richards**, Howard E., Star Route, Allentown, Pa. 1940
- Richards**, Leo J., P.O. Box 465, Benjamin Franklin Sta., Washington, D.C. 1928
- Richardson**, Thomas W., Col. of Com., University, La. 1939
- Ricketts**, Faye M., Univ. of Wichita, Wichita, Kan. 1938
- Riddle**, Jesse H., 50 Central Park W., New York, N.Y. 1917
- Riddle**, N. Gilbert, Ohio State Univ., Col. of Com., Columbus, Ohio. 1925
- Riefler**, Winfield W., Inst. for Advanced Study, School of Econ. and Pol., Princeton, N.J. 1937
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- Riley**, Donald C., R.R. 3, Valley View Dr., Alexandria, Va. 1928
- Riley**, Eugene B., Thomas Jefferson High School, Dept. of History, Brooklyn, N.Y. 1928
- Riley**, H. E., 1249 N. Utah St., Arlington, Va. 1934
- Riley**, Roderick H., 2807 Connecticut Ave., Apt. 103, Washington, D.C. 1932
- Risinger**, Burton R., Col. of Com., University, La. 1939
- †Rist**, Charles, 18 rue du Parc le Clagny, Versailles, France. 1922
- Ritchie**, Fred, DePauw Univ., Dept. of Econ., Greencastle, Ind. 1936
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- Robb**, William C., Univ. of Illinois, Col. of Com., Urbana, Ill. 1937
- Robbins**, Edwin C., 115 Parker St., Newton Centre, Mass. 1912
- Robbins**, Laurence B., 50 S. LaSalle St., Chicago, Ill. 1934
- Roberts**, Christopher, 65 N. Fullerton Ave., Montclair, N.J. 1929
- Roberts**, David R., 33 Winnemay St., Natick, Mass. 1938
- Roberts**, George B., Nat. City Bank of New York, New York, N.Y. 1932
- Roberts**, Harold S., 1349 Kenyon St., N.W., Washington, D.C. 1937
- Roberts**, Hazel V., 526 W. 113th St., New York, N.Y. 1925
- Roberts**, James C., Firestone Tire and Rubber Co., Akron, Ohio. 1938
- †Robertson**, D. H., London School of Economics, Houghton St., London, W.C.2, England. 1937
- Robey**, Ralph W., Columbia Univ., New York, N.Y. 1927
- Robinson**, Frederick B., Col. of City of New York, 139th St. and Convent Ave., New York, N.Y. 1909
- Robinson**, Leland R., 40 Exchange Pl., New York, N.Y. 1916

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- Robinson, Maurice H., Pine Orchard, Conn. 1899
- Robinson, Myles E., 2017 Fairmont Ave., Columbus, Ohio. 1937
- Robinson, Thomas H., Colgate Univ., Hamilton, N.Y. 1933
- Robotka, Frank, Iowa State Col., Ames, Iowa. 1923
- Rockafellow, Robert, Rhode Island State Col., Kingston, R.I. 1935
- Rodkey, Robert G., Univ. of Michigan, School of Bus. Admin., Ann Arbor, Mich. 1919
- Roe, Frederick, 135 S. La Salle St., Chicago, Ill. 1932
- Roelke, Harold V., Fed. Res. Bank of New York, New York, N.Y. 1930
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- Rogoff, Esther, Hunter Col., 2 Park Ave., New York, N.Y. 1938
- Roloff, Walter E., 1806 Arapahoe St., Golden, Colo. 1930
- Rolph, John G., Amalgamated Bank of New York, 11-15 Union Sq., New York, N.Y. 1940
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- Röpke, Wilhelm, 56 Quai Gustave Ador, Geneva, Switzerland. 1927
- Rorem, C. Rufus, American Hospital Asso., 18 E. Division St., Chicago, Ill. 1927
- Rose, Douglas H., Maryland Life Ins. Co., 10 South St., Baltimore, Md. 1924
- Rose, Dwight C., 90 Broad St., New York, N.Y. 1930
- Rose, James V., 9617 Baltic Rd., Cleveland, Ohio. 1938
- Rose, Joseph R., 5466 Montgomery Ave., Philadelphia, Pa. 1934
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- *Rosenthal, Lessing, 105 W. Monroe St., Chicago, Ill. 1891
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- Ross, Maurice O., Butler Univ., Indianapolis, Ind. 1933
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- Rowe, William H., Bur. of Agric. Econ., Div. of Agric. Fin., Washington, D.C. 1935
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- Rubin, Edward P., 135 S. La Salle St., Room 2040, Chicago, Ill. 1940
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- Ruggles, Clyde O., Grad. School of Bus. Admin., Soldiers Field, Boston, Mass. 1911
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- Rukeyser, Merryle S., 80 Pryer Ter., New Rochelle, N.Y. 1931
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- Rushmore, David B., c/o Evans, Stillman, Room 1901, 14 Wall St., New York, N.Y. 1937
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- Russell, Lewine H. (Mrs.), Haverford Gables, Apt. 4A, Haverford, Pa. 1934
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- Russell, Warren L., 9424 220th St., Queens Village, L.I., N.Y. 1928

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- Ryan, Frederick L.**, N.L.R.B., U. S. Court House and Custom House, St. Louis, Mo. 1930
- Ryan, John A.**, Nat. Catholic Welfare Conference, 1312 Massachusetts Ave., N.W., Washington, D.C. 1906
- Ryder, Oscar B.**, 102 Johnson Pl., Alexandria, Va. 1922
- Saby, Rasmus S.**, Gettysburg Col., Gettysburg, Pa. 1914
- Sage, Dean**, 49 Wall St., New York, N.Y. 1910
- Sakolski, Aaron M.**, 270 Riverside Dr., New York, N.Y. 1904
- Saks, John I.**, 431 Hawthorne Ct., Madison, Wis. 1938
- Salant, Aaron B.**, 1155 Park Ave., New York, N.Y. 1934
- Salant, Walter S.**, U. S. Dept. of Com., Indus. Econ. Div., Washington, D. C. 1940
- Salera, Virgil**, 1220 Oxford St., Berkeley, Calif. 1935
- Salz, Arthur**, Ohio State Univ., Dept. of Econ., Columbus, Ohio. 1934
- Sammons, Wheeler**, 536 Deming Pl., Chicago, Ill. 1935
- Samuelson, Carl A.**, Box 413, South Bend, Ind. 1936
- Samuelson, Paul A.**, 13A Ware St., Cambridge, Mass. 1938
- Sanders, Thomas H.**, 225 Morgan Hall, Soldiers Field, Boston, Mass. 1919
- Sanford, George W.**, Case School of Applied Sci., Cleveland, Ohio. 1933
- Sapir, Michael**, Ohio State Univ., Dept. of Econ., Columbus, Ohio. 1938
- Saposs, David J.**, 1928 Belmont Rd., N.W., Washington, D.C. 1928
- Sargent, Noel**, 14 W. 49th St., New York, N.Y. 1924
- Sarosi, Oliver**, Ridgely Apts., Birmingham, Ala. 1940
- Sasuly, Max**, Soc. Sec. Bd., Office of the Actuary, Washington, D.C. 1938
- Saulnier, Raymond J.**, 540 W. 123rd St., New York, N.Y. 1936
- Saunders, Stanley A.**, 146 Walmer Rd., Toronto, Ont., Canada. 1931
- Sauvain, Harry C.**, 505 N. Park Ave., Bloomington, Ind. 1934
- Sawwaf, Husni A.**, American Univ. of Beirut, Beirut, Syria. 1938
- Saxon, Olin G.**, Sheffield Hall, New Haven, Conn. 1939
- Saxton, Pierre W.**, 195 Broadway, New York, N.Y. 1918
- Schaffner, Joseph H.**, 1150 5th Ave., New York, N.Y. 1924
- Schaper, William A.**, Univ. of Oklahoma, Norman, Okla. 1926
- Schickele, Rainer**, c/o J. D. Black, Harvard Univ., Littauer Center, Cambridge, Mass. 1936
- Schiermann, John C. J.**, 4054 Magnolia Pl., St. Louis, Mo. 1925
- Schlagenhauf, Milton J.**, 316 Huntington Ave., Boston 17, Mass. 1922
- Schlatter, William J.**, Yale Univ., 304 Sheffield Hall, New Haven, Conn. 1940
- Schlauch, William S.**, 219 Division Ave., Hasbrouck Heights, N.J. 1931
- Schlink, Frederick J.**, Consumers' Res., Washington, N.J. 1931
- Schmalz, Carl N.**, R. H. Stearns Co., 140 Tremont St., Boston, Mass. 1930
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- Schmidt, Edward B.**, Univ. of Nebraska, 103 Law Bldg., Lincoln, Neb. 1934
- Schmidt, Emerson P.**, Univ. of Minnesota, Minneapolis, Minn. 1934
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- Schmitt, Alfred C.**, Box 5, San Quentin, Calif. 1905
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- Schnur, Gerry J.**, 141 Park Ave., Glencoe, Ill. 1935
- Schoenfeldt, Boris M.**, Columbia Univ., Dept. of Econ., New York, N.Y. 1934
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- Schultz, Arch D.**, Ohio Chamber of Com., Columbus, Ohio 1940
- Schultz, Robert**, Drew Univ., Brothers Col., Madison, N.J. 1932
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- Schumpeter, Joseph A.**, 7 Acacia St., Cambridge, Mass. 1929
- Schwartz, Carl H., Jr.**, Farm Credit Admin., Washington, D.C. 1938

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- Schweitzer**, Arthur, 515 Iverson Ave., Laramie, Wyo. 1938
- Schwenger**, Robert B., R.R. 2, Rockville, Md. 1935
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- Scribshaw**, Stewart, 7410 Watson Ave., Wauwatosa, Wis. 1913
- Scroggs**, William O., 340 E. 57th St., New York, N.Y. 1910
- Seaberg**, Hugo, Raton, N.M. 1912
- Seal**, Harvey C., Macomb, Ill. 1937
- Searles**, Clair K., R.R. 3, Box 74, Toledo, Ohio. 1928
- Sechrist**, Horace, Northwestern Univ., Wieboldt Hall, Chicago, Ill. 1909
- Sedgwick**, Robert C., Syracuse Univ., Dept. of Econ., Syracuse, N.Y. 1936
- Segal**, Mandal R., 33 Mellen St., Cambridge, Mass. 1938
- Segal**, Melvin J., Southern Illinois State Normal Univ., Carbondale, Ill. 1934
- Seidl**, Julius C. G., 421 W. 21st St., New York, N.Y. 1940
- Seidler**, Gustav, Jr., 4311 Cathedral Ave., N.W., Washington, D.C. 1935
- Seidman**, Joel, 3436 Auchentoroly Ter., Baltimore, Md. 1939
- Seidman**, Phillip K., Farnsworth Bldg., Memphis, Tenn. 1939
- Seko**, Konosuke, 814 Kami Osaki Ichome, Shinagawa, Tokyo, Japan. 1916
- Selbert**, Frida F. (Mrs.), 10525 Carnegie Ave., Cleveland, Ohio 1937
- Selekman**, Ben M., Associated Jewish Philanthropies, 24 Province St., Boston, Mass. 1926
- Selko**, Daniel T., 722 Jackson Pl., Washington, D.C. 1929
- Seltzer**, Lawrence H., Wayne Univ., Detroit, Mich. 1921
- Sepmeier**, Kurt A., Municipal Univ. of Wichita, Wichita, Kan. 1928
- Sergott**, Edmund T., Apt. 130, 210 Rhode Island Ave., N.E., Washington, D.C. 1933
- Sessler**, Matt J., 19 Mariners Pl., Plainfield, N.J. 1940
- Setre**, Kenneth T., 2804 Garfield Ave., Minneapolis, Minn. 1935
- Severson**, Lewis E., Beloit Col., Beloit, Wis. 1929
- Seymour**, Helen V., 1740 K St., N.W., Washington, D.C. 1939
- Shafer**, Joseph E., Bowling Green State Univ., Bowling Green, Ohio. 1929
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- Sharfman**, I. Leo, Univ. of Michigan, Dept. of Econ., Ann Arbor, Mich. 1914
- Shaskan**, George, Jr., c/o Shaskan and Co., 39 Broadway, New York, N.Y. 1939
- Shaulis**, Lloyd L., Tufts College, Mass. 1931
- Shaw**, A. W., Winnetka, Ill. 1910
- Shaw**, Albert, Hastings-on-Hudson, N.Y. 1886
- Shaw**, Alejandro E., Charcas 682, Buenos Aires, Argentina, South America. 1933
- Shaw**, Ernest R., 20 Exchange Pl., New York, N.Y. 1922
- Shaw**, Fayette B., 64 E. Lake St., Room 1400, Chicago, Ill. 1940
- Shaw**, Harry F. R., 204 Tuck Hall, Hanover, N.H. 1925
- Shaw**, William H., 1819 Broadway, Room 1022, New York, N.Y. 1940
- Shea**, J. Whitney, Houghton Col., Houghton, N.Y. 1938
- Shearer**, Warren W., Wabash Col., Crawfordsville, Ind. 1940
- Shearman**, Henry P., Miami Univ., Oxford, Ohio. 1933
- Sheehan**, John H., 1137 E. Corby Blvd., South Bend, Ind. 1939
- Shelton**, Henry W., Box 48, LaJolla, Calif. 1916
- Shelton**, W. Arthur, 3211 Tennyson St., N.W., Washington, D.C. 1919
- Shepard**, Earl F., 1214 Washtenaw Ave., Ann Arbor, Mich. 1940
- Shepherd**, Geoffrey S., Iowa State Col., Dept. of Agric. Econ., Ames, Iowa. 1931
- Shepherd**, Henry L., 93 Elm St., Hartford, Conn. 1935
- Sheppard**, Ernest J., 217 W. Lutz St., West Lafayette, Ind. 1926
- Sherman**, William R., Hillsdale Col., Hillsdale, Mich. 1923
- Sherrington**, Charles E. R., Railway Res. Serv., 4 Cowley St., Westminster, London S.W.1, England. 1923
- Shields**, D. Murray, Irving Trust Co., 1 Wall St., New York, N.Y. 1925
- Shields**, George W., 634 Starks Bldg., Louisville, Ky. 1940
- Shields**, Harald G., Univ. of Chicago, School of Bus., Chicago, Ill. 1937
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- Shiskin, Julius**, 875 Boulevard E., Weehawken, N.J. 1937
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- Slusser, E. K.**, 1804 W. Congress St., Chicago, Ill. 1939
- Small, Joseph T.**, Paine Webber and Co., 25 Board St., New York, N.Y. 1936
- Smart, L. Edwin**, 410 King Ave., Columbus, Ohio. 1923
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- Smith, Arthur A.**, Southern Methodist Univ., Dallas, Tex. 1939
- Smith, Bradford B.**, 7 Heathcote Rd., Scarsdale, N.Y. 1924
- Smith, Carl D.**, Babson Inst., Babson Park, Mass. 1935
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- Smith, Elmer A.**, 135 E. 11th Pl., Chicago, Ill. 1937
- Smith, Everett G.**, Univ. of Texas, Austin, Tex. 1933
- Smith, Frank P.**, Univ. of Rochester, Rochester, N.Y. 1932
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- Smith, James G., 80 Murray Pl., Princeton, N.J. 1922
- Smith, John J., 1112 N. 31st St., Birmingham, Ala. 1939
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- Smith, Lawrence, 88 Leighton Rd., Wellesley, Mass. 1923
- Smith, Lucius, Fayetteville State Teachers Col., Fayetteville, N.C. 1934
- Smith, Mark A., U. S. Tariff Com., 7th and E Sts., N.W., Washington, D.C. 1912
- Smith, Nelson L., Hopkinton, N.H. 1924
- Smith, Newlin R., Univ. of Buffalo, Buffalo, N.Y. 1934
- Smith, Pierre R., Elyria Savings Bldg., Elyria, Ohio. 1930
- Smith, R. Elberton, Univ. of Denver, Denver, Colo. 1939
- Smith, Richard R., 120 E. 39th St., New York, N.Y. 1922
- Smith, Robert S., 681 College Sta., Durham, N.C. 1935
- Smith, Roy J., Univ. of California at Los Angeles, Div. of Agric. Econ., Los Angeles, Calif. 1939
- Smith, Victor E., Northwestern Univ., 307 Harris Hall, Evanston, Ill. 1937
- Smith, Walter B., 128 Main St., Williamstown, Mass. 1925
- Smith, Wendell R., 209 Univ. Hall, Iowa City, Iowa. 1940
- Smola, Frank A., 2501 57th Ave., Cicero, Ill. 1933
- Smolinski, Harold J., Box 2186, University, La. 1940
- Smyth, William H., "Fernwald," Berkeley, Calif. 1914
- Smythe, Limen T., Iowa State Col., Dept. of Econ., Ames, Iowa. 1940
- Snively, Tipton R., Monroe Hill, University, Va. 1918
- Snider, Joseph L., Grad. School of Bus. Admin., Soldiers Field, Boston, Mass. 1918
- Snider, Robert G., 401 Marlborough Rd., Yonkers, N.Y. 1935
- Sniffen, Clarence E., Dairymen's League Co-operative Assoc., 11 W. 42nd St., New York, N.Y. 1931
- Snoy, Baron Jean C., Chateau de Bois Seigneur Isaac, Belgium. 1929
- Snyder, Carl, 33 Liberty St., New York, N.Y. 1920
- Snyder, Harry R., McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. 1937
- Snyder, Ivan V., 607 Electric Bldg., Indianapolis, Ind. 1937
- Sogge, Tillman M., Soc. Sec. Bd., Bur. of Res. and Statis., Washington, D.C. 1937
- Soldinger, Morris A., 619 E. Pabst St., Ironwood, Mich. 1935
- Sollenberger, Issac J., Univ. of Oklahoma, Faculty Exchange, Norman, Okla. 1926
- Solterer, Josef, East Falls Church, Va. 1932
- †Sombart, Werner, Humboldtstr. 35a, Berlin-Grunewald, Germany. 1929
- Somers, Herman M., 2633 Connecticut Ave. N.W., Washington, D.C. 1940
- Somers, Richard H., Watervliet Arsenal, Watervliet, N.Y. 1931
- Sommaripa, George G., 68 Dudley St., Brookline, Mass. 1930
- Sorrell, Vernon G., 229 N. Dartmouth, Albuquerque, N.M. 1926
- Soudek, Josef, 900 W. End Ave., New York, N.Y. 1939
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- Spahr, Walter E., 8 Michigan Rd., Bellerose, L.I., N.Y. 1920
- Spalding, Merrill T., Box 556, Palo Alto, Calif. 1934
- Spang, Kenneth M., 311 St. Ronan's St., New Haven, Conn. 1937
- Spangler, Clifford D., Box 1124, Sta. A, Lincoln, Neb. 1929
- Sparkman, Reuben H., 130-B Senate Office Bldg., Washington, D. C. 1931
- Sparks, Earle S., Univ. of South Dakota, Vermillion, S.D. 1923
- Sparks, Frank H., 1220 Cortez Dr., Glendale, Calif. 1936
- Spencer, Francis A., 722 Jackson Pl., N.W., Washington, D.C. 1939
- Spencer, Myron J., 812 Mitchell Ave., Cincinnati, Ohio. 1940
- Spengler, Edwin H., 114-28 177th St., St. Albans, L.I., N.Y. 1928
- Spengler, Joseph J., Duke Univ., Durham, N.C. 1928
- Spero, Herbert, Col. of City of New York, 17 Lexington Ave., New York, N.Y. 1940
- Spiegel, Henry W., Duquesne Univ., 331 4th Ave., Pittsburgh, Pa. 1938
- Spielmanns, John V., Franklin Park Hotel, 1332 Eye St., N.W., Washington, D.C. 1936
- †Spiethoff, Arthur A. C., Univ. of Bonn, Bonn, Germany. 1932
- Sprague, Albert A., 1130 Lake Shore Dr., Chicago, Ill. 1934

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- Springer**, John Y., Box 4124, Duke Sta., Durham, N.C. 1937
- Spurr**, William A., Univ. of Nebraska, Col. of Bus. Admin., Lincoln, Neb. 1938
- Spurrier**, Leo, Huron Col., Huron, S.D. 1925
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- Staebler**, Neil, 424 S. Main, Ann Arbor, Mich. 1933
- Staley**, A. Eugene, Fletcher School of Law and Diplomacy, Medford, Mass. 1928
- Stalson**, J. Owen, Harvard School of Bus., Soldiers Field, Boston, Mass. 1935
- Stapp**, Peyton, 1200 Sacramento St., San Francisco, Calif. 1936
- Stark**, Walter R., Loomis, Sayles and Co., Inc., 140 Federal St., Boston, Mass. 1920
- Starkweather**, Louis P., 935 Oakwood Pl., Plainfield, N.J. 1934
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- Staudinger**, Hans W., 66 W. 12th St., New York, N.Y. 1936
- Stebbins**, Lucy W., 2731 Durant Ave., Berkeley, Calif. 1920
- Stecker**, Margaret L., 1703 New York Ave., N.W., Washington, D.C. 1917
- Stehman**, J. Warren, Univ. of Minnesota, Minneapolis, Minn. 1916
- Stein**, Emanuel, New York Univ., Washington Square Col., New York, N.Y. 1931
- Stein**, Harold, 4574 Kings Highway, Brooklyn, N.Y. 1929
- Steiner**, George A., Indiana Univ., Bur. of Bus. Res., Bloomington, Ind. 1939
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- Stern**, Alfred W., 615 Crescent Ct., Highland Park, Ill. 1920
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- Stevens**, W. Mackenzie, Univ. of Maryland, College Park, Md. 1926
- Stevenson**, Louis T., 60 E. 42nd St., New York, N.Y. 1935
- Stevenson**, Robert C., Univ. of Idaho, Southern Branch, Pocatello, Idaho. 1934
- Stevenson**, Russell A., Univ. of Minnesota, Minneapolis, Minn. 1927
- Stewart**, Bryce M., 2015 R.K.O. Bldg., 1270 6th Ave., New York, N.Y. 1921
- Stewart**, John L., 6036 Daniel Rd., N.W., Washington, D.C. 1925
- Stewart**, Paul W., Anderson, Nichols Associates, Inc., 330 W. 42nd St., New York, N.Y. 1931
- Stewart**, W. Blair, 4512 Windom Pl., N.W., Washington, D.C. 1930
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- Stiefel**, Carl F., 150 Scotland Rd., South Orange, N.J. 1917
- Stigler**, George J., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. 1940
- Stiles**, Lynn A., 919 Reba Pl., Evanston, Ill. 1937
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- Stockder**, Archibald H., Columbia Univ., School of Bus., New York, N.Y. 1925
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- Stockwell**, Marvel M., 405 Hilgard Ave., Los Angeles, Calif. 1922
- Stokes**, Milton L., 36 College Ave., Annville, Pa. 1934
- Stolper**, Gustav, 52 Wall St., New York, N.Y. 1940
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- Stout**, C. Frederick C., John R. Evans and Co., 337 Arch St., Philadelphia, Pa. 1917
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- Strayer**, Paul J., Princeton Univ., Dept. of Econ., Princeton, N.J. 1935
- Streeter**, Thomas W., Sussex Ave., Morristown, N.J. 1912
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- Strong**, Earl D., Grinnell Col., Grinnell, Iowa. 1922
- Strong**, Gordon B., 5600 Aylesboro, Squirrel Hill, Pittsburgh, Pa. 1937
- Strong**, Wendell M., 29 Hillcrest Rd., Glen Ridge, N.J. 1918
- Stroock**, Sol M., 61 Broadway, New York, N.Y. 1909
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- Studenski**, Paul, 21 E. 10th St., New York, N.Y. 1930
- Subercaseaux**, Guillermo, Calle Merced 152, Santiago, Chile, South America. 1913
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- Suflern**, Arthur E., 297 4th Ave., New York, N.Y. 1930
- Suflin**, Sidney C., Ohio State Univ., Dept. of Econ., Columbus, Ohio. 1935
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- Surface**, Frank M., 1 W. 72nd St., New York, N.Y. 1923
- Surveyer**, Arthur, Suite 1201, Dominion Sq. Bldg., Montreal, Que., Canada. 1936
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- Sutton**, Glenn W., Univ. of Georgia, School of Com., Athens, Ga. 1937
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- Sweeney**, Stephen, 25 Roselawn Ave., Lansdowne, Pa. 1931
- Sweet**, Homer N., 80 Federal St., Boston, Mass. 1919
- Sweet**, John L., 415 Fullerton Pkwy., Apt. 1401-A, Chicago, Ill. 1936
- Sweezy**, Maxine Y. (Mrs.), 10 Forest St., Cambridge, Mass. 1936
- Sweney**, Lowry, Lowry Sweeney, Inc., 17 S. High St., Columbus, Ohio. 1933
- Swift**, Harold H., Union Stock Yards, Chicago, Ill. 1924
- Tausch**, Carl F., U. S. Dept. of Agric., Room 3756 South Bldg., Washington, D.C. 1929
- Taft**, Philip, 154 Irving Ave., Providence, R.I. 1937
- Taggart**, Joseph H., Univ. of Kansas, School of Bus., Lawrence, Kan. 1930
- Tamagna**, Frank M., Xavier Univ., Cincinnati, Ohio. 1940
- Tandy**, W. Lou, Eureka Col., Eureka, Ill. 1932
- Tanenbaum**, Jerome, 525 Broadway, New York, N.Y. 1917
- Tannenbaum**, Frank, Columbia Univ., Dept. of Hist., New York, N.Y. 1925
- Tarshis**, Lorie, 65 Langdon St., Cambridge, Mass. 1937
- Tator**, Samuel W., Junior Col. of Com., 389 Whitney Ave., New Haven, Conn. 1918
- Taussig**, Charles W., American Molasses Co. of New York, 120 Wall St., New York, N.Y. 1933
- Taussig**, Frank W., Harvard Univ., Cambridge, Mass. 1887
- Taylor**, Albion G., Col. of William and Mary, Williamsburg, Va. 1928
- Taylor**, Amos E., Bur. of For. and Dom. Com., Fin. Div., Washington, D. C. 1917
- Taylor**, Archibald W., 143 Stanmore Pl., Westfield, N.J. 1916
- Taylor**, Carl D., 85 S. Lake Ave., Albany, N.Y. 1920
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- Taylor**, George W., Univ. of Pennsylvania, 3440 Walnut St., Philadelphia, Pa. 1934
- Taylor**, Glen S., 2703 Key Blvd., Arlington, Va. 1940
- Taylor**, Henry C., Farm Found., 606 S. Michigan Ave., Chicago, Ill. 1903
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- Taylor**, Kenneth W., Wartime Prices and Trade Bd., Ottawa, Ont., Canada. 1923
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- Tead, Ordway**, Harper and Bros., 49 E. 33rd St., New York, N.Y. 1922
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- Temby, J. L.**, 321 N. Level St., Dodgeville, Wis. 1925
- Temple, Alan H.**, Nat. City Bank, New York, N.Y. 1939
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- Terborgh, George W.**, 4542 N. 26th St., Arlington, Va. 1928
- Tereshtenko, Valery J.**, 601 W. 149th St., Apt. 2, New York, N.Y. 1934
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- Thelen, Max**, 136 Alvarado Rd., Berkeley, Calif. 1935
- Theobald, Adrian D.**, 1366 N. Dearborn Pkwy., Chicago, Ill. 1938
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- Thomas, George**, Univ. of Utah, Salt Lake City, Utah. 1917
- Thomas, Raymond D.**, Oklahoma A. and M. Col., School of Com., Stillwater, Okla. 1921
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- Thompson, William D.**, 526 Main St., Racine, Wis. 1918
- Thomson, Dorothy L. (Mrs.)**, 100 Pelham Rd., New Rochelle, N.Y. 1927
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- Thorpe, Willard L.**, 404 Riverside Dr., New York, N.Y. 1920
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- Tinley, James M.**, Giannini Found., Univ. of California, Berkeley, Calif. 1938
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- Todd, Arthur J.**, 602 Lake St., Evanston, Ill. 1921
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- Towne, Ezra T.**, Univ. of North Dakota, Grand Forks, N.D. 1905
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- Trafton, George H., 143-15 38th Ave., Flushing, N.Y. 1926
- Trant, James B., University, La. 1923
- Travers, Frank J., Lincoln Nat. Life Ins. Co., Fort Wayne, Ind. 1939
- Treanor, Glen R., 6924 8th St., N.W., Washington, D.C. 1929
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- Truesdell, Leon E., 3429 Ordway St., N.W., Washington, D.C. 1920
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- Tuckerman, Gustavus, Jr., New York Univ., Univ. Col., Univ. Heights, Bronx, New York, N.Y. 1934
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- Turner, Arthur P. L., Jr., 1202 N. Danville St., Arlington, Va. 1934
- Turner, Robert C., Wayne Univ., Dept. of Econ., Detroit, Mich. 1935
- Turney, Merle C., Carnegie Inst. of Tech., Pittsburgh, Pa. 1935
- Tuthill, John W., 1A Gibson Ter., Cambridge, Mass. 1938
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- Tyler, Cornelius B., 165 Broadway, New York, N.Y. 1913
- Tyson, Francis, Univ. of Pittsburgh, Pittsburgh, Pa. 1918
- Ueland, Alexander, 3900 Connecticut Ave., N.W., Washington, D.C. 1937
- Ullian, Frieda S., 35 Dolphin Rd., Newton, Mass. 1938
- Ullman, Adolph, 281 Columbus Ave., Boston, Mass. 1938
- Ulmer, Carl D., Koppers Co., Res. Dept., Koppers Bldg., Room 926, Pittsburgh, Pa. 1926
- Ulmer, Melville J., 973 E. 26th St., Brooklyn, N.Y. 1940
- Umbreit, Myron H., 2111 Ridge Ave., Evanston, Ill. 1928
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- Unkrich, Robert C., 907 Canal Bank Bldg., New Orleans, La. 1940
- Unstad, Lyder K. L., Alma Col., Alma, Mich. 1934
- Unterberger, S. Herbert, 2216 N. 52nd St., Philadelphia, Pa. 1935
- Uppgren, Arthur R., 1625 E. River Rd., Minneapolis, Minn. 1932
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- Upton, R. Miller, 6318 Willow St., New Orleans, La. 1938
- Usher, Abbott Payson, 43 Larch Rd., Cambridge, Mass. 1911
- Vacek, Jaroslav, Czechoslovak Export Inst., Prague VII, Bohemia. 1929
- Vail, Robert P., Montgomery Pl., Decatur, Ill. 1940
- Vaile, Roland S., Univ. of Minnesota, Minneapolis, Minn. 1924
- Valentine, Roger W., Halsey, Stuart and Co., 201 S. La Salle St., Chicago, Ill. 1924
- Valgren, Victor N., 2947 Macomb St., N.W., Washington, D.C. 1910
- Valk, Willem L., Weissenbruchstraat 398, Den Haag, Netherlands. 1928
- Van Arsdell, Paul M., Univ. of Illinois, 117 Com. Bldg., Urbana, Ill. 1934
- Vance, Rupert B., Univ. of North Carolina, Box 495, Chapel Hill, N.C. 1938
- van Dam, L. G., Wilhelmijnstraat 49, Haarlem, Netherlands. 1940
- Vanderblue, Homer B., 2629 Stewart Ave., Evanston, Ill. 1911
- Van de Woestyne, Royal S., 5428 Woodlawn, Apt. 2-D, Chicago, Ill. 1922

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- Van Kirk, Jay C., Tulane Univ., Col. of Com., New Orleans, La. 1937
- Van Kleeck, Mary, 130 E. 22nd St., New York, N.Y. 1916
- Van Metre, Ralph M., Breckinridge Hall, Danville, Ky. 1931
- Van Metre, Thurman W., 35 Claremont Ave., New York, N.Y. 1916
- Van Pelt, Henry W., 82 Gillett St., Hartford, Conn. 1927
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- Villard, Henry H., 813 University Ave., Minneapolis, Minn. 1935
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- Wormser, Felix E., 420 Lexington Ave., New York, N.Y. 1924
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- Wythe, George**, 1325 23rd St., S., Arlington, Va. 1933
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Los Angeles Pub. Lib., 530 S. Hope St.
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Watts, V. O.

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Marysville

Yuba County Junior Col., Union High School Lib.

Mills College

Hoover, G. E.
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Mill Valley

Daugherty, W. F.

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Col. of the Holy Names, 2036 Webster St.
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Riverside

Riverside Junior Col. Lib.

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and I Sts.
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ments Lib.

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 Krueger, M. C.
 Kyrk, H.
 Labovitz, I. M.
 Lange, O.
 Leavens, D. H.
Legler Regional Branch Lib.,
115 S. Pulaski Rd.
 Leland, R. G.
 Leland, S. E.
Lewis Inst. Lib., c/o F. L.
Talcott, Madison and Robey
Sts.
 Lichtenstein, W.
 Lingle, B. C.
 Lyon, L. S.
 MacLeish, J. E.
 Masiko, P., Jr.
 McCarthy, S. L.
 McFarland, E. D.
 Mehl, P.
 Merhoff, R. H.
 Meyer, C.
 Miller, J. W.
 Millis, H. A.
 Mints, L. W.
 Mitchell, G. W.
 Mogilnitsky, T. A.
 Monchow, H. C.
Morgan Park Junior Col.
 Morgan, G. A.
 Morse, H. C.
 Mosak, J. L.
 Mueller, F. W., Jr.
 Nef, J. U.
 Nerlove, S. H.
Newberry Lib., Walton Pl.
 O'Donnell, C.
 Ogburn, W. F.
 Osgood, R. C.
 Palyi, M.
 Phillips, E. J., Jr.
 Pike, E. R.
 Prior, J. H.
 Robbins, L. B.
 Roe, F.
 Rorem, C. R.
 Rosenthal, L.
 Roth, L.
 Rubin, E. P.
 Sammons, W.
 Secrist, H.
 Shaw, F. B.
 Shields, H. G.
 Simons, H. C., Jr.
 Simpson, H. D.
 Slusser, E. K.
 Smith, E. A.
 Sprague, A. A.
Stair, H. B., Illinois Bell Tel.
Co., 212 W. Washington St.
 Stone, R. W.
 Swanish, P. T.
 Sweet, J. L.
 Swift, H. H.
 Taylor, H. C.
 Theobald, A. D.
Univ. of Chicago Lib., Period
Dept., Harper M22
 Valentine, R. W.
 Van de Woestyne, R. S.
 Viner, J.
 Vining, R.
 Vivian, G. F.
 Waldeck, H.
 Walther, H. O.
 Welch, R. B.
 Wells, C. C.
 Wentworth, E. N.
 Wermuth, R. P.
 Woodbury, C.
Woodlawn Branch Lib., 6247-
49 Kimbark Ave.
Wright Junior Col. Lib., 3400
N. Austin Ave.
 Wright, C. W.
 Wright, H. G.
 Wright, H. R.
 Yntema, T. O.
 Zimring, O. D.
Chillicothe
 Adams, W. S.
Cicero
 Smola, F. A.
Decatur
Decatur Pub. Lib.
 Dockeray, J. C.
 Eakin, F.
James Millikin Univ., Orville
B. Gorin Lib.
 Vail, R. P.
De Kalb
Northern Illinois State Teachers
Col. Lib.
Des Plaines
Maine Township High School,
Dempster St. and Potter Rd.
Elmhurst
Elmhurst Col. Lib.
 Haworth, C. L.
Elsah
Principia Col. Lib.

Eureka

Tandy, W. L.

Evanston

Bell, J. W.
 Bredin, J. H.
 Brown, L. O.
 Cady, G. J.
 Chrysler, R. L.
 Clark, F. E.
 Crane, J. B.
 Custis, V.
 Deibler, F. S.
 Dougall, H. E.
 Duncan, D. J.
 Dutton, H. P.
 Gane, F. H.
 Guthmann, H. G.
 Haensel, P.
 Hahne, E. H.
 Hawkinson, J. R.
 Herrold, L. D.
 Hohman, E. P.
 Howard, E. D.
 Jaffé, W.
 Kemp, A.
 Maynard, E. L.
 Morrison, P. L.
 Noetzel, A. J.
Northwestern Univ. Lib.
 Phillips, S. A.
 Simons, A. M.
 Smith, V. E.
 Spriegel, W. R.
 Stiles, L. A.
 Swanson, A. E.
 Todd, A. J.
 Torgerson, H. W.
 Tousley, R. D.
 Umbreit, M. H.
 Vanderblue, H. B.
 Walton, I. T.
 Wardwell, C. A. R.

Galesburg

Campbell, J. A.
Galesburg Pub. Lib.
Knox Col., Henry M. Seymour
Lib., Berrien and Cedar Sts.
 Morton, J. E.
 Stimson, C. W.

Glencoe

Schnur, G. J.
Wolfe, Lloyd R., 476 Park Ave.

Glen Ellyn

Chamberlin, V. B.

Greenville*Greenville Col. Lib.***Harvey**

Linerode, A. A.

Highland Park

Cahn, R. D.
 Stern, A. W.

Homewood

Goetz, B. E.

Jacksonville

MacMurray Col. Lib., Illinois
Woman's Col.
 Stratton, H. J.

La Grange

Lyons Township High School,
S. Brainerd Ave.
 Young, H. T.

Lake Forest

Barat Col. of the Sacred Heart
 Johnson, E. A.
 Keller, L. A.
Lake Forest Col. Lib.

La Salle

Wilson, A. J.

Lebanon*McKendree Col.***Lisle***St. Procopius Col. Lib.***Macomb**

Seal, H. C.
Western Illinois State Teachers
Col. Lib.

Monmouth

Cleland, J. S.

Naperville*North Central Col. Lib.***Normal**

Illinois State Normal Univ.
Lib.

Oak Park

Fritzmeier, L. H.
 Henry, R. J.
Oak Park Pub. Lib.
 Watkins, J. B.

Oregon

Lowden, F. O.

Peoria

Peoria Pub. Lib.
 Tillotson, L. G.

Quincy

Quincy Col., c/o August Reyling
Quincy Free Pub. Lib.

Riverside

Huelster, L. F.

Rockford

Flinn, B. W.
 Lovenstein, M.
Rockford Col. Lib.

Rock Island

Augustana Col. and Theological
Seminary, Denkman Me-
memorial Lib.
 Fryxell, C. A.
 Nordstrom, O. L.

Springfield

Huston, J. W.
Illinois State Lib.

Urbana

Allen, H. K.
 Baldwin, C. D.
 Bartlett, R. W.
 Blodgett, R. H.
 Brown, P. H.
 Carr, H. C.
 Case, H. C. M.
 Converse, P. D.
 Dickinson, F. G.
 Elliott, C. M.
 Giffin, R. R., Jr.
 Gray, H. M.
 Green, P. M.
 Hoover, D. H.
 Huegy, H. W.
 Hunter, M. H.
 Jones, F. M.
 Jordan, G. L.
 King, E. E.
 Krapf, R. C.
 Leavitt, W. L.
 Lee, F. E.
 Litman, S.
 Locklin, D. P.
 Losee, G. C.
 Mandeville, M. J.
 McNatt, E. B.
 Morgan, J. D.
 Neiswanger, W. A., Jr.
 Nolen, R. M.
 Robb, W. C.
 Ruggles, C. G.
 Scovill, H. T.
 Shilland, P. D.
 Stadhagen, H. A.
 Thompson, C. M.

Underhill, H. F.
Univ. of Illinois Lib., Period.
Dept.

Urbana Junior Col. Lib.

Van Arsdell, P. M.

Whalen, O. L.

Whittaker, E.

Working, E. J.

Western Springs

Erdmann, H. H.

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Waukegan Pub. Lib.

Wheaton

Wheaton Col. Lib.

Wilmette

Emmet, B.

Winnetka

Cox, F. D.

Peterson, F. B.

Shaw, A. W.

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Bloomington

Alm, I. W.

Batchelor, J. A.

Braden, S. E.

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Christenson, C. L.

Cleveland, W. C.

Crawford, M. M.

Hadley, C. D.

Haring, H. A., Jr.

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Matchett, G. J.

Miller, T. A.

Mills, M. C.

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Silverstein, N. L.

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Weimer, A. M.

Wells, H. B.

Collegeville

St. Joseph Col. Lib.

Columbus

Miller, J. D., Jr.

Crawfordsville

Ormes, F. R.

Shearer, W. W.

Earlham

Stinneford, C. L.

Evansville

Long, D.

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Fort Wayne Pub. Lib.

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Franklin

Franklin Col. Lib.

Gary

Adult Lib., 524 Garfield St.

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Goshen Col. Lib.

Greencastle

De Pauw Univ. Lib.

Jome, H. L.

McGuire, C. W.

Ritchie, F.

Hanover

Hanover Col. Lib.

Holy Cross

Joseph, M. E.

Indianapolis

Bailey, L. J., Indiana State
Lib.

Barrett, D. C.

Beckett, G. L.

Bridenstine, M. G.

Brooks, B. F.

Butler Col. Lib.

Camp, C. B.

Efroymson, C. W.

Indianapolis Pub. Lib., Read-
ing Room Dept., St. Clair Sq.

Luten, D. B.

Ross, M. O.

Snyder, I. V.

Lafayette

Andrews, W. H.

Gates, W. B., Jr.

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Owen, W. V.

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Thomas, R. G.

Wiley, J. W.

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Manchester Col. Lib.

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Peter St.

Gamber, M. P.

Hermens, F. A.

Samuelson, C. A.

Sheehan, J. H.

South Bend Pub. Lib., S. Main
St. at Wayne

Watson, J. D.

Terre Haute

Bohan, R. T.

Emeline Fairbanks Memorial
Lib.

Indiana State Teachers Col.
Lib.

Mitchell, W. F.

Valparaiso

Valparaiso Univ. Lib.

West Baden Springs

West Baden Col.

West Lafayette

Estey, J. A.

Sheppard, E. J.

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Ames

Allen, E. D.

Bowman, M. J.

Hart, A. G.

Hopkins, J. A., Jr.

Hoyt, E. E.

Iowa State Col. Lib.

Lynch, E. S.

Murray, W. G.

Reid, M. G.

Robotka, F.

Schultz, T. W.

Shepherd, G. S.

Smythe, L. T.

Thompson, S. H.

Wright, W.

Cedar Falls

Iowa State Teachers Col. Lib.

Cedar Rapids

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Hickok, C. T.

Macy, C. W.

Davenport

Collins, W. J.

Decorah

Luther Col. Lib.

Des Moines

Bohlman, H. W.
Cosson, C.
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Lynch, D.
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Dubuque Carnegie Stout Lib., 11th St.
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Fairfield

Parsons Col. Lib.

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Grinnell

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Smith, W. R.
State Univ. of Iowa Lib., Library Annex

Lamoni

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Warburg Col. Lib.

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Atchison

Baska, L. M.

Baldwin

Guest, H. W.

El Dorado

Harms, E. L., Senior High School

Emporia

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Pickett, R. R.

Fort Scott

Pollock, K. W.

Hays

Ft. Hays Kansas State Col. Lib.
McCartney, E. R.

Hillsboro

Tabor Col. Lib.

Independence

Independence High School Lib.

Kansas City

Junior Col. Lib., 9th and State

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Faust, L.
Gagliardo, D.
Howey, R. S.
Ise, J.
Jensen, J. P.
Kebker, V. W.
Pettee, J. C.
Stockton, F. T.
Taggart, J. H.
Univ. of Kansas Lib., Period. Dept.
Waters, L. L.

Lindsborg

Bethany Col. Lib.

McPherson

Olson, O. A.

Manhattan

Grimes, W. E.
Gunselman, M. A.
Hodges, J. A.
Kansas State Agric. Col. Lib.
Nelson, C. L.

Newton

Scott, H. W.

North Newton

Bethel Col. Lib.

Ottawa

Ottawa Univ. Lib.

Parsons

Bradley, C. J.

Pittsburg

Kansas State Teachers Col., Porter Lib.

Pratt

Bd. of Educa.

St. Mary's

Cronin, J. A.

Salina

Marie, J.

Topeka

Kansas State Lib., State House
Topeka Free Pub. Lib.
Wales, H. G.
Washburn Col. Lib.

Wichita

Baker, H. B.
Friends Univ. Lib.
Neff, F. A.
Ricketts, F. M.
Sepmeier, K. A.
Wichita City Lib.

Winfield

Southwestern Col. Lib.

KENTUCKY

Barbourville

Union Col. Lib.

Berea

Berea Col. Lib.

Bowling Green

Bowling Green Bus. Univ. Lib.
McKinney, D. T.
Western Kentucky State Teachers Col. Lib.

Danville

Centre Col. Lib.
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Minor, M. C.
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Frankfort

Unemployment Compensation Com., Dept. of Indus. Rela.

Georgetown

Fields, C. R.

Lexington

Bekker, K.
Best, H.
Carpenter, C. C.
Carter, L. H.
Hall, W. S.
Jennings, W. W.
Ketchum, M. D.
Martin, J. W.
McVey, F. L.
Nichols, W. D.
Palmer, E. Z.
Price, H. B.
Sullivan, R.
Univ. of Kentucky Lib.
Wiest, E.

Louisville

Fenimore, J. B.
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and Library Pl.*
Shields, G. W.
*Univ. of Louisville Lib., Bel-
knap Campus*

Murray

Murray State Teachers Col. Lib.

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Owensboro

Gillim, M. H.

Pine Mountain

Kilduff, V. R.

Richmond

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ers Col. Lib., Lancaster Ave.*
Moore, W. J.

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Oliver, C., Jr.

Hammond

*Southeastern Louisiana Col.
Lib.*

Houma

Swanton, W. F.

Lafayette

Ashburn, K. E.
*Southwestern Louisiana Inst.
Lib.*

Monroe

Miles, J. R.

Nachitoches

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New Orleans

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Buchan, L. J.
*De Abreu, P. Nabuco, Consul
of Brazil, 616 Poydras St.*
Dillard Univ. Lib.
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Elsasser, R. W.
Halley, D. M.
Jones, A. H.
Marvin, D. M.
Mitchell, H. A.
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Parker, B. D.
Phelps, E.
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Masonic Temple, 333 St.
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Upton, R. M.
Van Kirk, J. C.

Ruston

Louisiana Poly. Inst. Lib.

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Ballinger, R. A.
Borth, D., Jr.
Bradbury, R. W.
Fischer, M. C.
Gile, B. M.
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*Louisiana State Univ., Agric.
Econ. Lib.*
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Mason, J. E.
McCracken, H. L.
Preston, S. W.
Richardson, T. W.
Risinger, B. R.
Smolinski, H. J.
Trant, J. B.
Zingler, E. K.

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Bangor Pub. Lib.

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Abrahamson, A.
Bowdoin Col. Lib.

Brown, P. M.
Catlin, W. B.
Cushing, M. B.

Lewiston

Bates Col. Lib.
Carroll, J. M.

Orono

Allen, E. J.
Burt, E. J., Jr.
Chadbourn, W. W.
Kirshen, H. B.
Univ. of Maine Lib.

Portland

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Bldg.*

Waterville

Breckenridge, W. N.
Morrow, C. H.

Winterport

Fernald, R. L.

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Baltimore

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Cooper, H. E.
Cronin, J. F.
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Goucher Col. Lib.
Hollander, J. H.
Hutcheson, H. H.
Loftus, J. A.
Marburg, T.
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*Notre Dame Col. Lib., Charles
St. Ave.*
Pancoast, E.
Peabody Inst.
Reynolds, L. G.
Rose, D. H.
*St. Mary's Seminary Lib.,
Philos. Dept., N. Paca St.*
Seidman, J.
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Smith, C. W.
Univ. of Baltimore Lib.
Weyforth, W. O.
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Brentwood

Freeman, C. A.

Cabin John

Bortz, N. M.

Chestertown

Washington Col. Lib.

Chevy Chase

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Bigge, G. E.
Chawner, L. J.
Clemen, R. A.
Crawford, A. W.
Fishburn, J. T.
Gardner, W. R.
Goldenweiser, E. A.
Jenkins, W. B.
Maher, A. G.
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Marshall, L. C.
Murray, M. G.
Peck, G.
Riggelman, J. R.
Ross, E.
Thomas, W.
Wertz, W. W.
Wilson, M. L.

Clinton

Massel, M. S.

College Park

Fisher, A. J.
Gay, M. C.
Gruchy, A. G.
Stevens, W. M.
Univ. of Maryland Lib.
Wyckoff, V. J.

Emmitsburg

St. Joseph's Col., Sister Isabelle,
Dean

Forest Glen

Fairley, L.

Frederick

Reddick, O. I.

Garrett Park

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Hyattsville

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Kensington

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North Chevy Chase

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Rockville

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Schwenger, R. B.

Silver Spring

Couper, W. J.
Dozier, H. D.
Hasse, A. R.
McLaughlin, G. E.

Towson

Maryland State Teachers Col.
Lib.

Westminster

Western Maryland Col. Lib.

MASSACHUSETTS

Allston

Crosby, G. R.

Amherst

Amherst Col. Lib.
Cance, A. E.
Chandler, L. V.
Cole, C. W.
Eddy, N. H.
Massachusetts State Col. Lib.
Rozman, D.
Taylor, G. R.

Auburndale

Biddle, C. P.

Babson Park

Babson Inst. Lib.
Duncan, J. S.
Smith, C. D.

Belmont

Huse, C. P.
Ingraham, O.

Bolton

Burnham, Frederick M., Jr.

Boston

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Bent, J. G., Jr.
Bloomfield, D.
Borden, N. H.
Boston Athenaeum, 10½ Beacon
St.
Boston Pub. Lib., Copley Sq.
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Bus. Lib., 20 City Hall Ave.,
1st Floor
Boston Univ., Bus. Admin.
Lib., 685 Commonwealth
Ave.
Boston Univ. Lib., Col. of
Liberal Arts, 688 Boylston St.
Boston Y.M.C.A. Lib., 316
Huntington Ave.
Bradley, R. M.
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Burrill, C. L.
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Copeland, M. T.
Cross, I. B., Jr.
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Dempsey, B. W.
Dept. of Labor and Industries
Lib., Div. of Statis.
Di Venuti, B.
Doherty, R. P.
Donaldson, M. H.
Donham, W. B.
Doriot, G. F.
Ebersole, J. F.
Elliston, H. B.
Filene, L.
Folts, F. E.
Friedberg, M.
Gragg, C. I.
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Hamilton, R. S.
Hanson, A. W.
Healy, J. J.
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Larson, H. M.
Learned, E. P.
Lewis, H. T.
Lingham, C. H.
Locke, H. D.
Massachusetts State Lib., State
House
Masson, R. L.
McDonough, C. A.
Meriam, R. S.
Merrill, E.
Morss, J. W.
Myers, A. H.
O'Neil, L. D.
Packard, R. M.
Ruggles, C. O.
Sanders, T. H.
Schlagenhauf, M. J.
Schmalz, C. N.
Selekman, B. M.
Simmons Col. Lib., 300 The
Fenway
Slichter, S. H.
Smith, D. T.
Smith, E. L.

Snider, J. L.
Social Service Lib., 18 Somerset
St.

Sprague, O. M. W.

Stalson, J. O.

Stark, W. R.

Stites, S. H.

Stratton, S. S.

Sweet, H. N.

Tosdal, H.

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Wilson, E.

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Bradford J

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State Teach

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Brown, D.

Eaves, L.

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Bourne, W.

Brown, T. J.

Burbank, E.

Butters, J.

Canfield, A.

Chamberlin

Cherington,

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Conant, L.

Crum, W. I.

Cunningham

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Daly, F. S.

Davis, P.

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Enke, S.

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Freeman, R. S.

Frickey, E.

Gilboy, E. W.

Glover, J. D.

Haberler, G.

Hall, C. A., Jr.

Hansen, A. H.

Harris, S. E.

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Res. in the Social Sciences,
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Harvard Univ., Grad. School
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Harvard Univ., Law School
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Harvard Univ., Lib.

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Jackson, D. C.

Leontief, W. W.

London C

Holyoke

Coombs, P. H.

Lincoln

Bliss, C. A.

Longmeadow

Clark, R. N.

Pickard Salt

TIGHT BOU

Edgartown

Jeremiah, J.

Fall River

Fall River Pub. Lib.

Framingham

Keir, J. S.

Myers, C. A.

Hanover

Hunt, B. C.

Haverhill

Haverhill Pub. Lib.

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Lumpkin, K. D.

Orton, W. A.

Smith Col. Lib.

Willett, E. F.

Norton

Hidy, M. E.

Jennings, H. C.

Wheaton Col. Lib.

Pittsfield

Wright, C. A.

Quincy

Bowen, L. J., P.O. Box 293

South Hadley
Comstock, A.
Dietrich, E. B.
Hewes, A.
Mount Holyoke Col. Lib.
Springfield
Cross, H. W.

Wallace, D. H.
Williams Col. Lib.

Worcester

Brandenburg, S. J.
Clark Univ. Lib.
Crompton, G.
Dewey, F. H.

Univ. of Michigan, Gen. Lib.

Watkins, L. L.
Wynne, W. H.

Berrien Springs

Beaty, E.

Detroit

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Quirin, E. L.
Williams, J. B.
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Loomis, R. H.
West Roxbury
O'Leary, J. M.
Williamstown
Fox, B.
McLaren, W. W.
Smith, W. B.

Palmer, W. B.
Paton, W. A.
Peterson, G. S.
Phelps, D. M.
*Pub. Lib., E. Huron and N.
Thayer St.*
Ratcliff, R. U.
Remer, C. F.
Riegel, J. W.
Rodkey, R. G.
Sharfman, I. L.
Shepard, E. F.
Simmons, E. C.
Staebler, N.
Trezise, P. H.

Flint

Flint Pub. Lib., E. Kearsley St.

Grand Rapids

McNaughton, F.
Ranck, S. H.

Highland Park

McGregor Pub. Lib.

Hillsdale

Sherman, W. R.

Houghton

*Michigan Col. of Mining and
Tech. Lib.*

Snider, J. L.
Social Service Lib., 18 Somerset St.

Sprague, O. M. W.

Stalson, J. O.

Stark, W. R.

Stites, S. H.

Stratton, S. S.

Sweet, H. N.

Tosdal, H. R.

Ullman, A.

Wernette, J. P.

Wilson, E. B.

Bradford

Bradford Junior Col., Lib.

Bridgewater

State Teachers Col. Lib.

Brookline

Brown, D. V.

Eaves, L.

Sommaripa, G. G.

Cambridge

Armstrong, F. E.

Baker, G. P.

Bergson, A.

Billings, A. G.

Black, J. D.

Bourne, W. N.

Brown, T. H.

Burbank, H. H.

Butters, J. K.

Canfield, A. J.

Chamberlin, E. H.

Cherington, C. R.

Cole, A. H.

Conant, L.

Crum, W. L.

Cunningham, W. J.

Dalisay, A. M.

Daly, F. S.

Davis, P.

Dewey, D. R.

Enke, S.

Fine, S. M.

Freeman, R. S.

Frickey, E.

Gilboy, E. W.

Glover, J. D.

Haberler, G.

Hall, C. A., Jr.

Hansen, A. H.

Harris, S. E.

Harvard Univ., Committee on Res. in the Social Sciences, 38-40 Holyoke House

Harvard Univ., Grad. School of Pub. Admin. Lib.

Harvard Univ., Law School Lib.

Harvard Univ., Lib.

Holly, J. L.

Jackson, D. C.

Leontief, W. W.

Luxton, G.

MacLaurin, W. R.

Mason, E. S.

Massachusetts Inst. of Tech., Massachusetts Ave.

Monroe, A. E.

Musgrave, R. A.

Nixon, R. A.

Palmer, D. L.

Radcliffe Col. Lib.

Randolph, E. F.

Raymond, F. E.

Reiss, H., 36 Corvart Hall, Oxford St.

Samuelson, P. A.

Schickele, R.

Schumpeter, J. A.

Segal, M. R.

Sweezy, M. Y.

Tarshis, L.

Taussig, F. W.

Thresher, B. A.

Trueblood, L. C.

Tsuru, S.

Tucker, D. S.

Tuthill, J. W.

Usher, A. P.

Williams, J. H.

Wilson, B. F.

Wilson, E. W.

Winters, R. A.

Charlestown

Calder, P. R.

Chestnut Hill

Foley, E. B.

Edgartown

Jeremiah, J.

Fall River

Fall River Pub. Lib.

Framingham

Keir, J. S.

Myers, C. A.

Hanover

Hunt, B. C.

Haverhill

Haverhill Pub. Lib.

Holyoke

Coombs, P. H.

Lincoln

Bliss, C. A.

Longmeadow

Clark, R. N.

Richard Salter Storrs Lib.

Medford

Halm, G.

Staley, E.

Mt. Hermon

Thompson, C. D.

Natick

Roberts, D. R.

Needham

Morss, N.

New Bedford

Langshaw, W. H.

Newton

Newton Free Lib.

Ullian, F. S.

Newton Centre

McKinley, S. J.

Normano, J. F.

Robbins, E. C.

Newton Highlands

Davis, H. B.

Lake, W. S.

Newtonville

Kobrock, J. P.

Northampton

Douglas, D. W.

Faulkner, H. U.

Forbes Lib.

Lowenthal, E.

Lumpkin, K. D.

Orton, W. A.

Smith Col. Lib.

Willett, E. F.

Norton

Hidy, M. E.

Jennings, H. C.

Wheaton Col. Lib.

Pittsfield

Wright, C. A.

Quincy

Bowen, L. J., P.O. Box 293

South Hadley

Comstock, A.
Dietrich, E. B.
Hewes, A.
Mount Holyoke Col. Lib.

Springfield

Cross, H. W.
Derber, M.
Lieson, W. A.
MacDuffie, J.
Ronk, S. E.
Wellman, H. C.

Tufts College

Manly, L. F.
Shaulis, L. L.
Tufts Col. Lib.

Waban

Estabrook, V. T.

Wakefield

Belmore, C. W.
Comins, H. N.

Waltham

Luce, R.

Watertown

Cronin, J. W.

Wellesley

Donnan, E.
Freeman, E. S.
Griffiss, Bartow, c/o Poor's Pub.
Co., 90 Broad St.
Jenks, L. H.
Killough, L. W.
Smith, L.
Wellesley Col. Lib.

Wellesley Farms

Moore, C. W.

Wellesley Hills

Babson, R. W.
Elder, R. F.
Matthews, J. M.
Quirin, E. L.
Williams, J. B.

West Newton

Loomis, R. H.

West Roxbury

O'Leary, J. M.

Williamstown

Fox, B.
McLaren, W. W.
Smith, W. B.

Wallace, D. H.
Williams Col. Lib.

Worcester

Brandenburg, S. J.
Clark Univ. Lib.
Crompton, G.
Dewey, F. H.
Duffy, J. L.
Erickson, R. A.
Gregory, P. M.
Holy Cross Col. Lib.
Lucas, A. F.
Maxwell, J. A.
Melder, F. E.
Worcester Free Pub. Lib.
Worcester Poly. Inst.

MICHIGAN

Adrian

Joachim, Sister Ann, Seina
Height Col.

Albion

Albion Col. Lib.
Miller, E. T., Jr.
Terpenning, W. A.

Alma

Unstad, L. K. L.

Ann Arbor

Bacon, M. A.
Bond, F. A.
Briggs, R. P.
Dickinson, Z. C.
Elliott, M.
Ford, R. S.
Griffin, C. E.
Haber, W.
Hoover, E. M., Jr.
Horner, R. R.
Jacobs, A. T.
Jamison, C. L.
Laing, L. L.
Palmer, W. B.
Paton, W. A.
Peterson, G. S.
Phelps, D. M.
Pub. Lib., E. Huron and N.
Thayer St.
Ratcliff, R. U.
Remer, C. F.
Riegel, J. W.
Rodkey, R. G.
Sharfman, I. L.
Shepard, E. F.
Simmons, E. C.
Staebler, N.
Trezise, P. H.

Univ. of Michigan, Gen. Lib.

Watkins, L. L.
Wynne, W. H.

Berrien Springs

Beaty, E.

Detroit

Anderson, K.
Badger, R. E.
Bailer, L. H.
Baker, O. P.
Bodman, H. T.
Court, A. T.
Daly, M.
Detroit Inst. of Tech., 2020
Witherell St.
Detroit Pub. Lib.
Du Brul, S. M.
Ekland, L. M.
Ellis, R. G.
Fitzgerald, L. E.
Goodman, G.
Honnold, J. H.
Kirk, L. K.
Levin, S. M.
Long, T. G.
Marygrove Col. Lib., Sister
Marie Virginia
Seltzer, L. H.
Troxel, C. E.
Turner, R. C.
Univ. of Detroit Lib., Mc-
Nichols Rd. at Livernois
Wayne Univ. Lib., 4841 Cass
Ave.
Willmes, H. J.

East Lansing

Cline, D. C.
Dunford, C. S.
Hagen, E. E.
Michigan State Col. Lib.
Patton, H. S.

Flint

Flint Pub. Lib., E. Kearsley St.

Grand Rapids

McNaughton, F.
Ranck, S. H.

Highland Park

McGregor Pub. Lib.

Hillsdale

Sherman, W. R.

Houghton

Michigan Col. of Mining and
Tech. Lib.

Howell
Dailey, D. M.

Ironwood
Erickson, A. E.
Junior Col. Lib., School Dist.
Soldinger, M. A.
Soldinger, M. A., Bd. of Educa.

Jackson
Jackson Pub. Lib., 280 W. Michigan Ave.
Junior Col. Lib., Wildwood Ave.

Kalamazoo
Bigelow, H. F.
Bowers, R. S.
Kalamazoo Col., Mandelle Memorial Lib.
Kalamazoo Pub. Lib.
Moore, F. W.
Western State Teachers Col.

Lansing
Michigan State Lib.

Marquette
Howenstine, E. J.
Northern State Teachers Col. Lib.

Mount Pleasant
Central State Teachers Col. Lib.

Muskegon
Hackley Pub. Lib.

Nazareth
Nazareth Col.

Olivet
Olivet Col. Lib.

Port Huron
Port Huron Junior Col. Lib., 508 Stanton St.

Royal Oak
Royal Oak Pub. Lib.

Saginaw
Hoyt Pub. Lib.

Sparta
French, R. W.

Ypsilanti
Michigan State Normal Col.

MINNESOTA

Ashby
Tollefson, R. M.

Bemidji
State Teachers Col.

Crosby
Independent School Dist. 51, Superintendent's Office

Duluth

Col. of St. Scholastica Lib.
Duluth Junior Col., 44th Ave. W. and 4th St.
Duluth Pub. Lib., 1st Ave. W. and 2nd St.
Matteson, J. S.
State Teachers Col.

Ely
Independent School Dist. 12

Hibbing
Hibbing Junior Col. Lib.

Mankato
Mankato Free Pub. Lib.
State Teachers Col. Lib.

Minneapolis
Altschul, E.
Blakey, R. G.
Boddy, F. M.
Borak, A. M.
Childs, F. E.
Dreiman, L. S.
Filipetti, G.
Federal Cartridge Corp.
General Mills, Inc., c/o A. E. Taylor, 200 Chamber of Com.
Garver, F. B.
Hart, A. L.
Heaton, H.
Kozelka, R. L.
Langum, J. K.
Lunden, L. R.
Marget, A. W.
Minneapolis Pub. Lib., 10th and Hennepin Ave.
Minneapolis Pub. Lib., Municipal Ref. and Bus. Branch, 508 2nd Ave., S.
Mudgett, B. D.
Myers, W. R.
Nightingale, E. A.
Ostlund, H. J.
Powell, O. S.
Pruefer, C. H.
Reighard, J. J.
Schmidt, E. P.
Setre, K. T.
Simpson, F. R. O.
Stehman, J. W.
Stevenson, R. A.
Stigler, G. J.
Tow, C. W.

Univ. of Minnesota Lib.
Uppgren, A. R.
Vaile, R. S.
Villard, H. H.
Weinfeld, W.
Wiers, P.
Yoder, D.

Moorhead
Concordia Col. Lib.
Hjelmstad, J. H.

Northfield
Burnstan, A. R.
Carleton Col. Lib.
Klaragard, S.
St. Olaf Col. Lib.

Rochester
Rochester Junior Col.

St. Cloud
State Teachers Col. Lib.

St. Paul
Allstrom, H. W., Minnesota Mutual Life Ins. Co.
Chute, A. H.
Col. of St. Thomas Lib.
Hamline Univ. Lib.
Houston, G. S.
James Jerome Hill Ref. Lib.
Jesness, O. B.
La Qua, M. E.
Macalester Col. Lib.
Minnesota Historical Society
Minnesota State Law Lib., State Capitol
St. Paul Pub. Lib., Order Dept., 4th and Washington St.
Univ. of Minnesota Lib., Univ. Farm
Waite, W. C.
Young, F. A.

Virginia
Junior Col. Lib.
Moe, F. B.

Winona
Col. of St. Teresa Lib.
Froelich, W.
State Teachers Col. Lib.
Sublette, M. H.
Woods, R. M.

MISSISSIPPI

Cleveland
Delta State Teachers Col. Lib.

Clinton
Mississippi Col. Lib.

Decatur
East Central Junior Col. Lib.

Greenwood
Poindexter, W. G., Jr.

Hattiesburg
Meek, G. P.
State Teachers Col. Lib.

Jackson
Millsaps Col., Carnegie-Mill-
saps Lib.

State College
Mississippi State Col. Gen. Lib.

University
Arant, R.
Univ. of Mississippi Lib.

MISSOURI

Boonville
Briggs, R. J.
Kemper Military School Lib.,
3rd St.

Clayton
Clayton Pub. Lib., 7753 For-
sythe

Columbia
Bopp, K. R.
Brown, H. G.
Cassels, J. M.
Clark, E. H.
Curtis, R. E.
Johnson, O. R.
Paustian, P. W.
Scott, DR
Stephens Col. Lib.
Univ. of Missouri Lib.
Wood, E.

Fayette
Central Col. Lib.
Kline, G. W.
Puckett, E. P.

Fulton
Westminster Col. Lib.

Jefferson City
Lincoln Univ. Lib.
McGraw, B. T.

Kansas City
Bodde, L. A.
Cady, E. L.
Foth, J. H.
Hupp, B. W.
Kansas City Pub. Lib., 9th
and Locust Sts.

Osborne, E. L.
Reinhardt, J. F.
Robb, T. B.
Teachers Col. Lib., 1840 E. 8th
St.
Univ. of Kansas, City Li-
brarian

Kirkville
Clevenger, C. H.
Northeast Missouri State Teach-
ers Col.

Kirkwood
Jekel, O. H.

Liberty
William Jewell Col. Lib.

Maplewood
Maplewood Pub. Lib. 7479
Manchester Ave.

Marshall
Murrell Memorial Lib.

Nevada
Cotley Col. Lib.

Parkville
Park Col. Lib.

Rolla
Orten, M. D.
School of Mines and Metallurgy
Lib.

St. Charles
Lindenwood Col. Lib.

St. Louis
Abbott, W. J., Jr.
Bothwell, W. C.
Cable, J. R.
Carr, J. A.
Cummings, M. W.
Curtis, L. S.
de Schweinitz, D.
Fontbonne Col. Lib., Wydown
and Big Bend Blvds.
Harris Teachers Col. Lib., 1517
S. Theresa

Helmreich, T. C.
Hinman, A. G.
Jackson, J. R.
Knapp, T. M.
Legan, W. E.
Lippincott, I.
Martin, W. M.
McCreary, J.
McDonald, J.

Mercantile Lib., Broadway and
Locust St.
O'Neill, H. J.
Penzler, K. E., Mississippi
Valley Trust Co., Invest-
ment Div., Trust Dept.
Ryan, F. L.
St. Louis Pub. Lib., Package
Entrance, 13th and Locust
Sts.
Schiermann, J. C. J.
Stephens, G. W.
Sulkin, L. L.
Washington Univ. Lib., Skinner
and Lindell
Wentworth, E. C.
Wenzlick, R.
Zempel, A.

Springfield
Southwest Missouri State Teach-
ers Col.

Steele
Rankin, J. O.

Tarkio
McCollough, E. V.
Tarkio Col. Lib.

University City
Boettler, H. F.

Warrensburg
Anderson, C. J.
Central Missouri State Teach-
ers Col. Lib.

Webster Groves
Gregory, W. L.

MONTANA

Billings
Cooper, V.

Bozeman
Hamilton, J. M.
Parsons, O. A.
Renne, R. R.

Butte
Thomas, R. L.

Dillon
State Normal Col. Lib.

Helena
Carroll Col. Lib.

Missoula
Ely, R. J. W.
State Univ. of Montana Lib.

NEBRASKA**Chadron**

Nebraska State Teachers Col. Lib.

Crete

Johnson, K. W.

Grand Island

Grand Island Pub. Lib.

Hastings

Dykstra, D.
Hastings Col. Lib.

Lincoln

Arndt, K. M.
Bullock, T. T.
Crawford, R. P.
Fille, H. C.
Gilmore, E. A., Jr.
Greffinius, R. A.
Hicks, C. M.
Kirshman, J. E.
Le Rossignol, J. E.
Lincoln City Lib.
Marburg, T. F.
Martin, O. R.
McNeill, C. E.
Peck, M.
Schmidt, E. B.
Spangler, C. D.
Spurr, W. A.
Swayzee, C. O.
Univ. of Nebraska Lib.
Virtue, G. O.
Watt, I.

Nebraska City

Pub. Lib.

Omaha

Creighton Univ. Lib.
Cusack, L. A.
Lucas, J. W.
Meek, W. T.
Municipal Univ. of Omaha Lib.
Omaha Pub. Lib., Corner 19th and Harney Sts.
Weisskopf, W. A.

Scottsbluff

Scottsbluff High School

Wayne

State Teachers Col. Lib.

NEVADA**Fallon**

Gordon, L. D.

Reno

Clark, W. E.
Davis, W. C.
Inwood, E. L.
Palmer, W. S., Jr.
Plumley, A. J.
Sutherland, E. G.
Venstrom, C.

NEW HAMPSHIRE**Chocorua**

Page, A.

Concord

New Hampshire State Lib.

Durham

Smith, H. W.
Univ. of New Hampshire, Hamilton Smith Lib.
Woodruff, R. J.

Hanover

Amos Tuck School Lib., Dartmouth Col.
Cusick, J.
Dankert, C. E.
Dartmouth Col. Lib.
Feldman, H.
Funkhouser, R. L.
Goodhue, E. W.
Harriman, J. W.
Keir, M.
Knight, B. W.
Leffler, R. V.
Linville, F. A.
McDaniel, J. M., Jr.
McDonald, J. L.
Olsen, H. V.
Purdy, H. L.
Rice, L. P.
Shaw, H. F. R.
Sikes, E. R.
Woodworth, G. W.

Hopkinton

Smith, N. L.

Manchester

Manchester City Lib.

New London

Colby Junior Col. Lib.

Portsmouth

Raynes, G. W.

NEW JERSEY**Asbury Park**

Kinmonth, J. L.

Bayonne

Bayonne Free Pub. Lib.

Bernardsville

May, R. A.

Bloomfield

Taylor, M., Librarian, High School Lib.

East Brunswick

Bagley, E. S.

East Orange

Gray, E.

Elizabeth

Elizabeth Free Pub. Lib.

Glen Ridge

Strong, W. M.

Gloucester City

Flowers, J. B.

Hasbrouck Heights

Schlauch, W. S.

Highland Park

Hopkins, F. W.
Hutchins, J. G. B.

Hillside

Kiernan, C. J.

Hoboken

Barnwell, G. W.
Bernheim, G. B.
Ennis, W. D.
Rosenberg, S.

Jersey City

Jersey City Free Lib., 472-488 Jersey Ave.
St. Peter's Col. Lib., 2641 Boulevard

Leonia

Clark, L.
Otto, E. A.
Ramsperger, H. G.
Sigsbee, R. A.

Madison

Drew Univ. Lib., Brothers Col.
Schultz, R.

Maplewood

Friedrich, W. G.
Hart, M. I.

Montclair

Foot, E. W.
Kusik, J. E.

Montclair Free Pub. Lib.,
Church St. and Valley Rd.
Roberts, C.
Russell, S. A.

Morristown

Streeter, T. W.

Newark

Barnard, C. I.
Bus. Branch of the Lib., 34
Commerce St.
Cheyney, W. J.
Finck, D. H.
Greef, A. O.
Kennedy, D. D.
Neifeld, M. R.
Newark Col. of Engineering and
Newark Tech. High School,
367 High St.
Nunn, W. L.
Peter, R. J.
Prudential Ins. Co. of America,
A. W. Schopp, Ins. Librarian
Pub. Lib., 5 Washington St.
Rhodes, E. E.
Univ. of Newark Lib., 40
Rector St.

New Brunswick

Agger, E. E.
Bagley, W. C., Jr.
Crowder, E. T., Jr.
Gaum, C. G.
Gideonse, M.
Harbeson, R. W.
Keller, H., Jr.
Knappen, L. S.
New Jersey Col. for Women
Lib.
Rutgers Col. Lib., G. A. Osborn,
Librarian
West, M. E.

Orange

Bennett, P. A.

Palisade

Holthausen, D. M.

Passaic

Mikoljon, S. J.

Paterson

Morris, W. S.

Perth Amboy

High School Lib.
Perth Amboy Pub. Lib.

Plainfield

Sessler, M. J.

Starkweather, L. P.

Princeton

Brown, J. D.
Cadman, J. W., Jr.
Dell, B. N.
Dixon, F. H.
Duncan, A. J.
Fetter, F. A.
Foerster, R. F.
Galbraith, J. K.
Graham, F. D.
Hannay, E. B.
Hickman, W. B.
Hildebrand, G. H., Jr.
Howard, S. E.
Hunsberger, W. S.
Kemmerer, E. W.
Lutz, F. A.
Lutz, H. L.
McCabe, D. A.
McIsaac, A. M.
Plum, L. V.
Princeton Univ. Lib.
Rieffler, W. W.
Smith, J. G.
Strayer, P. J.
Whittlesey, C. R.

Ridgewood

Dorau, H. B.
G. L. Pease Memorial Lib.

South Orange

Norton, J. D.
Stiefel, C. F.

Summit

Foster, J. R.

Toms River

Johnson, W. L.

Trenton

New Jersey State Lib.
Rider Col., Moore-Gill Lib.
State Teachers Col. Lib.
Stephan, A. H. F.
Trenton Free Pub. Lib.

Upper Montclair

Atkins, P. M.
Carpenter, W. M.
Glover, C. A.
Labastille, F. M.

Washington

Schlink, F. J.

Weehawken

Jordan, V.
Karger, J.
Shiskin, J.

Westfield

Anderson, D. F.
Hostutler, H.
Oehler, C.
Taylor, A. W.
Tucker, R. S.

West Orange

Gourrich, P. P.

Woodbury

Hurff, G. B., Jr.

NEW MEXICO

Albuquerque

Logan, R. R.
Sorrrell, V. G.
Univ. of New Mexico Lib.

Raton

Seaberg, H.

NEW YORK

Albany

Adams, L. P.
Bucknam, R. F.
Carlson, R. I.
Dept. of Labor, c/o E. T. Stout,
Office of Indus. Com., State
Office Bldg.
Fleming, R. D.
Gordman, H. S.
Kinsella, T.
Martin, M. E.
New York State Lib., State
Educa. Bldg.
New York State Teachers
Assoc., Pub. Inf. Service, 152
Washington Ave.
Rosenfield, M.
Taylor, C. D.
Weber, E. B.

Alfred

Alfred Univ. Reading Room
Crandall, B. B.
Galbreath, C. E.

Amityville

Amityville High School Lib.

Annandale-on-Hudson

Bard Col. Lib.

Armonk

Brown, C. C.

Atlantic Beach

Morson, W. T.

Aurora

Davis, J. S.

Magee, M. A.
Weld, W. E.
Wells Col. Lib.

Bedford Hills
Angus, W. N.

Bellerose, L.I.
Spahr, W. E.

Bronxville
Hayes, S. P., Jr.
Latour, C. C.
Sarah Lawrence Col. Lib.

Brooklyn
Achinstein, A.
Anderson, H. A.
Asofsky, A. A.
Auerbach, S. J.
Backman, J.
Blake, E. M.
Bornemann, A.
Brooklyn Col. Lib., Bedford Ave. and Ave. H

Cohen, H. L.
Colvin, W.
Corbett, J. F.
Crowley, J. P.
Dannenberg, F. M.
Dutcher, J. R.
Fitch, L. C.
Gideonse, H. D.
Glassman, A. R.
Goetz, J. H.
Gottsegen, J. J.
Greidinger, B. Bernard, 7602 21st Ave.

Griffin, J. I.
Hession, C. H.
Kogel, G.
Korey, E. L.
Kriegel, M. E.
Laidler, H. W.
Levine, A. J.
Long Island Univ., 300 Pearl St.

Max, W. D.
McCarthy, P. M.
Mendieta, F. A.
Montague Branch Lib., 197 Montague St.
Nathanson, N. I.
Nussbaum, H.
Perlman, B.
Pratt Inst. Free Lib., 220 Ryerson St.
Ratner, S.
Riley, E. B.
Ross, M.

Rubenstein, I.
Ruhmer, O. E. M.
Runge, E. J.
St. John's Univ. Lib., 75 Lewis Ave.
Serri, F. R., 66 Court St.
Stein, H.
Ulmer, M. J.
Weitz, L.
Wermel, M. T.
Wolfson, T.
Young, E. R.
Zunder, R. D. F.

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Helms, L. A.
 Manhart, L. F.
 Shafer, J. E.

Canton
Canton Pub. Lib.

Cincinnati
 Aylstock, E. J.
 Bird, F. H.
 Bozic, A.
 Bursick, R. C.
 Byrne, J. M.
 Calhoun, W. P.
 Chancellor, W. E.
Cincinnati Pub. Lib.
 Dieckmann, A.
 Dyer, E.
 Eggherman, H.
 Ellsworth, P. T.
 Foreman, C. J.
 Freedman, A. M.
 Henig, H.
 Hewett, W. W.
 Hodde, F. H.
 Smelser, D. P.
 Spencer, M. J.
 Tamagna, F. M.
Univ. of Cincinnati Lib., Bur-
nett Woods Pk.
 Welsh, L. M.
 Wolfe, F. E.
Xavier Univ. Lib., Victory
Pkwy.

Cleveland
 Arbuthnot, C. C.
 Ayres, L. P.
 Berger, A. O.
 Carlton, F. T.
Cleveland Col. Lib., 167 Public
Sq.
Cleveland Pub. Lib., Order
Dept., 325 Superior Ave.
Fed. Res. Bank Lib.
Fenn Col. Lib., E. 24th and
Euclid
 Foster, L. O.
 James, A. C.
John Carroll Univ. Lib., Univ.
Heights
 Johnson, H. H.
 McKinnon, C. N.
 Rose, J. V.
 Russel, A. W.
 Sanford, G. W.
 Selbert, F. F.
 Sidlo, T. L.
Ursuline Col. for Women, 2234
Overlook Rd.

Weisman, R.
 Whitsett, J. M.

Cleveland Heights
 Hill, D. A.

Columbus
 Ackley, G.
 Beckman, T. N.
 Bitterman, H. J.
 Bowers, E. L.
Capital Univ. Lib.
 Caplan, B.
 Condoide, M. V.
 Cordell, H. W.
 Dassel, V. H.
 Davis, S. W.
 Dice, C. A.
 Donaldson, E. F.
 Duffus, W. M.
 Egle, W. P.
 Falconer, J. I.
 Hayes, H. G.
 Held, F. E.
 Herbst, A.
 Hoagland, H. E.
 Huntington, C. C.
 James, C. L.
 Jucius, M. J.
 Kellogg, L. S.
 Kibler, T. L.
 Kimball, M.
 Maynard, H. H.
Ohio State Lib., State Office
Bldg.

Ohio State Univ. Lib.
 Patton, R. D.
 Riddle, N. G.
 Robinson, M. E.
 Salz, A.
 Sapir, M.
 Schultz, A. D.
 Shaffer, W. B.
 Smart, L. E.
 Stevens, R. T.
 Sufrin, S. C.
 Sweeney, L.
 Walradt, H. F.
 Weidler, W. C.
 Welsh, E. C.
 Wolfe, A. B.
 Zorbaugh, G. S. M.

Conneaut
Carnegie Pub. Lib., State St.

Dayton
Dayton Pub. Lib.
Univ. of Dayton, Albert Emme-
uel Lib.

Delaware

Barnes, G. H.
Hand, G. H.
Keener, J. W.
Ohio Wesleyan Univ. Lib.

Elyria

Smith, P. R.

Fremont

Hayes Memorial Lib., Hayes Ave.

Gambier

Blum, J. W.
Kenyon Col. Lib.
Titus, P. M.

Glendale

Whitney, N. R.

Granville

Denison Univ. Lib.
Dernburg, H. J.
Gordon, L. J.

Hiram

Andress, A. E.
Hiram Col. Lib.

Hudson

Western Reserve Academy Lib.

Kent

Anthony, D. E.
Corey, C. S.
Hudson, H. W.
Kent State Univ. Lib.
Kochenderfer, C. C.

Lakewood

Pub. Lib., 15425 Detroit Ave.

Lima

Lima Pub. Lib.

Manchester

Geeting, R. E.

Marietta

Clark, R. F.

Middletown

Middletown Free Pub. Lib.

New Concord

Heckman, H. W.
Muskingum Col. Lib., Johnson Hall

Niles

Davis, W. Z.

Oberlin

Lewis, B. W.
McPherson, W. H.
Nilsson, A. E.
Oberlin Col. Lib.
Peirce, P. S.
Wooster, H. A.

Oxford

Cawthorn, D. R.
Kelso, H.
Miami Univ. Lib.
Peterson, J. M.
Pillion, J. C.
Potter, H.
Shearman, H. P.
Western Col. Lib.
Whelpton, P. K.

Painesville

Lake Erie Col., Murray Lib.

South Euclid

Notre Dame Col. Lib.

Springfield

Krauss, D. T.
Todd, E. S.
Wittenberg Col. Lib.

Tiffin

Horak, J.

Toledo

Becker, N. M.
Bellemore, D. H.
Black, H. R. E.
De Sales Col. Lib., 815 Superior St.
Frey, H. A.
Miller, G. W.
Searles, C. K.
Theodorides, A.
Toledo Pub. Lib.
Toledo Univ. Lib., 2801 W. Bancroft St.

Warnock

Thornborough, W. G., Jr.

Waynesville

Gilman, S., R.F.D. 2

Westerville

Otterbein Col. Lib.

Wilberforce

Wilberforce Univ., Carnegie Lib.

Wooster

Eberhart, E. K.
Tostlebe, A. S.
Wooster Col. Lib.

Yellow Springs

Antioch Col. Lib.
Carlson, V.

Youngstown

Pub. Lib., Reuben McMillan Free Lib., Wick and Rayen Aves.
Smith, J. E.
Youngstown Col. Lib., 410 Wick Ave.

Zanesville

McGinnis, R. D.

OKLAHOMA

Ada

East Central State Teachers Col. Lib.

Bethany

Bethany-Peniel Col.

Durant

Southeastern State Col. Lib.

Edmond

Central State Teachers Col. Lib.

Enid

Phillips Univ. Lib., Univ. Sta.

Langston

C. A. and N. Univ. Lib.

Miami

Northeastern Junior Col., 3rd and I Northeast
Percefull, S. C.

Norman

Adams, A. B.
Campbell, C. A.
Griswold, J. A.
Schaper, W. A.
Shuman, R. B.
Sollenberger, I. J.
Univ. of Oklahoma Lib.

Oklahoma City

Carnegie Lib.

Shawnee

Oklahoma Baptist Univ. Lib.

Stillwater

Baugh, R. H.
Burris, E. C.
Larson, A. L.
Nahl, P. C.
Nelson, P.
Oklahoma A. and M. Col. Lib.
Thomas, R. D.
Wallin, Z. B.

Tablequah*Northeastern Teachers Col. Lib.***Tonkawa***Univ. Preparatory School and Junior Col. Lib.***Tulsa***Finney, T. W.
Tulsa Pub. Lib.
Univ. of Tulsa Lib.***Weatherford***Southwestern State Col. Lib.***OREGON****Ashland***Southern Oregon Col. of Educa.
Lib.***Corvallis***Oregon State Agric. Col. Lib.
Wheeler, B. O.***Eugene***Aitchison, B.
Comish, N. H.
Crumbaker, C.
Erb, D. M.
French, D. R.
Morris, M. H.
Morris, V. P.
Univ. of Oregon Lib.
Wood, L. A.***Forest Grove***Pacific Univ. Lib.***Portland***Akerman, C.
Goldhammer, B.
Keezer, D. M.
Lib. Asso. of Portland
Mason, W. E.
Raver, P. J.
Reed Col. Lib.
U. S. Dept. of the Interior,
Bonneville Project, Box 3537***St. Benedict***Keber, Urban, St. Benedict's
Abbey***Salem***Oregon State Lib.
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Mitchell, A. W.***Beaver Falls***Geneva Col., McCartney Lib.***Ben Avon***Dinic, C. J.***Bethlehem***Bishop, W. L.
Bradford, F. A.
Bratt, E. C.
Carothers, N.
Cowin, R. B.
Curtis, G. B.
Danhof, C. H.
Diamond, H. M.
Eby, B. S.
Mayer, R. W.
Tripp, L. R.***Bryn Mawr***Bryn Mawr Col. Lib.***California***State Teachers Col. Lib.***Cambridge Springs***Alliance Col.***Carlisle***Dickinson Col. Lib.
Fink, C. W.
Warner, W. J.***Chambersburg***Wilson Col., John Stewart Me-
morial Lib.***Chestnut Hill***McMullan, W. N.
Phillips, Walter M., 9500 Mars-
tan Rd.***Cheyney***Lemon, T. A.
Training School for Teachers
Lib.***Churchville***Fleisher, A.***Easton***Lafayette Col. Lib.
Phinney, J. T.
Pub. Lib.
Ratzlaff, C. J.***East Pittsburgh***Newbury, F. D.
West, R. J.***East Stroudsburg***State Teachers Col.***Erie***Erie Junior Col., Erie Trust
Bldg.
Erie Pub. Lib.
Stout, Randall, 914 Chestnut St.***Gettysburg***Larkin, G. R.
Saby, R. S.***Grove City***Grove City Col. Lib.
Haines, G. H.***Harrisburg***Hoyle, H.
Pennsylvania State Lib.***Haverford***Bancroft, G.
Fetter, F. W.
Haverford Col. Lib.
Russell, L. H.***Hazleton***Hazleton Pub. Lib.
Janssen, H.***Huntingdon***Zassenhaus, H. K.***Immaculata***Madeleine, M. G.***Jenkintown***Liberty, Miss, Beaver Col.***Johnstown***Johnstown Junior Col.
May, J. W.***Kingston***Crook, W. H.***Lancaster***Barnes, H. R.
Fischer, H.
Franklin and Marshall Col. Lib.
Laird, N. P.*

Geographical List of Members and Subscribers

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LansdowneSweeney, S.
Teaf, H. M., Jr.**Latrobe**

Kent, R. P.

LewisburgBiscoe, A. B.
Bucknell Univ., Carnegie Lib.
Peterson, R.**Lincoln University**

Vail Memorial Lib.

Llanerch (Del. Co.)

Foery, R. W.

Loretto

St. Francis Col. Lib.

Mansfield

State Teachers Col. Lib.

McKeesport

Buchanan, F.

MeadvilleAllegheny Col. Lib.
Fisher, J. L.
Long, L. J.**Merion**

Huebner, S. S.

Mt. Lebanon

Blair, J. J.

New Wilmington

McKee, C. W.

PhiladelphiaAlderfer, E. B.
Alderson, W.
Atkinson, S. K.
Balderston, C. C.
Barkas, B. W.
Bell, J. F.
Bendiner, I.
Bezanson, A.
Bird, D. E.
Bowman, R. T.
Breyer, R. F.
Budd, T. A.
Buehler, A. G.
Burdick, E. D.
Bye, R. T.
Capp, S. B.
Carson, W. J.
Christman, F. L.
Clewett, R. M.
Cochran, H. A.
Cox, R.

Doering, E. R.

Drexel Inst. Lib.

Emerich, T. P.

Fair, M. L.

Fed. Res. Bank of Philadelphia
Lib., P.O. Box 1394

Fenninger, C. W.

Fisher, W. E.

Flubacher, J. F.

Frain, H. L.

Gemmill, P. F.

Gill, J. D.

Harr, L. A.

Harris, W. C.

Hayman, H. H.

Hench, W. M.

Hess, H. W.

Hettinger, H. S.

Hobart, D. M., Curtis Publish-
ing Co., Independence Sq.

Hoffman, G. W.

Hovde, H. T.

Howell, P. L.

Huebner, G. G.

Johnson, E. R.

Keith, E. G.

Kelsey, C.

Ledig, A. K.

Levine, A. T.

Lewis, E. H.

Lib. Co. of Philadelphia, Juni-
per and Locust Sts.

Lockley, L. C.

Loman, H. J.

Loucks, W. N.

Magdoff, H. S.

Malott, E. O.

Mandel, B.

Mead, E. S.

Newman, W. H.

Noetzel, G. A. J.

Palmer, G. L.

Patterson, E. M.

Patterson, G. F.

Patterson, S. H.

Philadelphia Free Lib., Period.
Dept., Middle City Sta.

Plummer, W. C.

Provident Mutual Life Ins. Co.
of Philadelphia Lib., P.O.
Box 7379

Rose, J. R.

Rosewater, V.

Rowland, J. P.

Rowlands, D. T.

Scholz, K. W. H.

Schrage, W. A.

Sienkiewicz, C. A.

Stout, C. F. C.

Stradley, L. P.

Taylor, G. W.

Taylor, W. H.

Temple Univ. Lib., Broad and
Berks Sts.

Thompson, C. S.

Thurston, M. F.

Unterberger, S. H.

Wall, A.

Warrington, W. E.

Way, W., Jr.

Weintraub, D.

Williams, A. H.

Woerner, K.

Young, R. A.

Pittsburgh

Amos, J. E.

Balcom, B. R.

Bass, L. W.

Baxter, R. J.

Blackburn, R. F.

Boer, A. E.

Carnegie Free Lib. of Allegheny
Carnegie Inst. of Tech. Lib.,
Schenley Pk.Carnegie Lib., Period. Dept.,
4400 Forbes St.

Cipriani, A. B.

Coleman, R. W.

d'Essipri, M.

Dixon, R. A.

Dowling, E. J.

Duquesne Univ. Lib., 904
Vickroy St.

Engstrom, B.

Farley, J. T.

Ferguson, J. M.

Field, K.

Flocken, I. G.

Fritz, W. G.

Fuller, K. G.

Gabbert, M. R.

George, W. D.

Gow, J. S.

Guild, L. R.

Hamilton, F. A., Jr.

Hosack, Specht, Conniff and
Wood, Park Bldg.

Hotchkiss, W. E.

Isaacs, A.

Jones, M.

King, H. J.

Knight, E. L.

Lanfear, V. W.

Leshner, C. E.

Lukens, S. J.

McCullough, J. V.

McDiarmid, O. J.

McKay, M. K.
McMurray, H. D.
Mt. Mercy Col. Lib., 3333 5th Ave.
Mudge, E. W.
Pennsylvania Col. for Women Lib., Woodland Rd.
Phelps, H. A.
Ross, S. B.
Russell, R. T.
Ryan, John T., Jr., 5914 Walnut St.
Scott, R. H.
Slesinger, R. E.
Spiegel, H. W.
Strong, G. B.
Tippetts, C. S.
Treffitz, K. L.
Turney, M. C.
Tyson, F.
Ulmer, C. D.
Univ. of Pittsburgh Lib., Cathedral of Learning, Room 530
Univ. of Pittsburgh, Bur. of Bus. Res.
Watson, J. P.
Wendt, E. F.
Worthing, M. W.
Wunder, C. S.

Reading

Reading Pub. Lib.

Scranton

Johnston, C. E.
Marywood Col. Lib., P.O. Box 491
Univ. of Scranton Lib.

Selinsgrove

Lawson, E. W.

Sewickley

Harbison, F. H.
Tener, K. J.

Slippery Rock

State Teachers Col.

State College

Butt, W. E.
Dye, E. V.
Foster, P. F.
Hasek, C. W.
Hawkins, E. R.
Hutchinson, K. D.
Leffler, G. L.
Mitch, G. F.
Pennsylvania State Col., Carnegie Lib.
Pyle, H. G.

Van Sant, E. R.
Waters, R. H.
Wueller, P. H.
Swarthmore
Ashton, H.
Fraser, H. F.
Malin, P. M.
McCahan, D.
Neisser, H. P.
Swarthmore Col. Lib.
Wilcox, C.

Uniontown

Brewster, R. Wallace, Fayette Undergrad. Center, Ella Peach School Bldg.

Upper Darby

Kahler, C. M.
Wiesen, T. F.

Villanova

Villanova Col. Lib.

Wallingford

Morris, H. L.

Washington

Boord, H. O.
Morris, B. R.
Waltersdorf, M. C.
Washington and Jefferson Col., Memorial Lib.

Wayne

Blackstone, A. E.

Waynesburg

Brock, L. V.

West Chester

Brainerd, C. P.

Williamsport

Williamsport Dickinson Seminary Lib.

PHILIPPINE ISLANDS

Baguio City

Univ. of the Philippines, Col. of Arts and Sci. Lib.

Los Banos

Univ. of the Philippines Lib., Col. of Agric., Laguna

Manila

Carlson, Mrs. Mabel R., P.O. Box 2137
Fernandez, Carlos P., 109 J. Luna

Legislative Service Office, Nat. Assembly
Nat. Development Co., P.O. Box 3360
Nat. Economic Council Lib., Commonwealth of the Philippines
Phil. Edu. Co., Inc., Magazine Dept., P.O. Box 620
Univ. of the Philippines Lib.

PUERTO RICO

Mayaguez

Univ. of Puerto Rico Lib., Colleges of Agric. and Engineering

Rio Piedras

Bermudez, J.
Codero, R. de J.
Descartes, S. L.
Univ. of Puerto Rico, Univ. Lib.

San German

Poly. Inst. of Puerto Rico

San Juan

Carnegie Lib. of Puerto Rico, Box 280

RHODE ISLAND

Bristol Ferry

Eddy, S. J.

Kingston

Rhode Island State Col. Lib.
Rockafellow, R.

Providence

Adams, J. P.
Beatty, W. C.
Bliss, Z. W.
Bosland, C. C.
Brown Univ. Lib.
Brown, W. A., Jr.
Kirkpatrick, A. L.
Poole, K. E.
Providence Pub. Lib.
Rhode Island State Lib.
Shoemaker, J. H.
Shors, W. F.
Taft, P.
Tebbutt, A. R.
Wilson, H. W.

SOUTH CAROLINA

Charleston

Bernfield, F. M.

Cochran, H. A.
Cox, R.

Sienkiewicz, C. A.
Stout, C. F. C.

McCullough, J. V.
McDiarmid, O. J.

Geographical List of Members and Subscribers

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Citadel Lib.
Wilcox, S.

Clemson College

Aull, G. H.
Hicks, W. T.
Ward, J. E., Jr.

Clinton

Kennedy, J. B.

Columbia

Benedict Col., Starks Lib.
Univ. of South Carolina, Main Lib.

Due West

Erskine Col. Lib.
Wright, J. M.

Greenville

Furman Univ. Lib.

Rock Hill

Winthrop Col., Carnegie Lib.

Spartanburg

Converse Col. Lib.

SOUTH DAKOTA

Brookings

South Dakota State Col. Lib.

Huron

Huron Col. Lib.
Spurrer, L.

Mitchell

Dakota Wesleyan Univ.

Sioux Falls

Augustana Col. Lib.
Sioux Falls Col. Lib.

Vermillion

Univ. of South Dakota Lib.
Sparks, E. S.

Yankton

Yankton Col. Lib.

TENNESSEE

Chattanooga

Chattanooga Pub. Lib.
Kruesi, P. J.
Phelps, C. W.
Univ. of Chattanooga Lib.

Greenville

Tusculum Col. Lib.

Jefferson City

Poindexter, C.

Knoxville

Barnett, P.
Bertram, R. F.
Corry, O. C.
Glocker, T. W.
Goeltz, J. D.
Knoxville Col. Lib.
Kohler, E. L.
Lamke, E. A.
Lawson McGhee Lib.
Macon, H. L.
Rapp, R. E.
Tennessee Valley Authority, Tech. Lib.
Univ. of Tennessee Lib.
Ward, F. B.
White, C. P.

Madison College

Madison Col., Druillard Lib.

Martin

Univ. of Tennessee, Junior Col. Lib.

Maryville

Wendt, P. F.

Memphis

Goodwyn Inst. Lib.
Hon, R. C.
Junkin, W. R.
Moloney, J. F.
Seidman, P. K.
Southwestern Lib.

Milligan College

Milligan Col. Lib.

Nashville

Agric. and Indus. State Col. Lib.
Campbell, R. A.
Cutler, A. T.
Eberling, E. J.
Fisk Univ. Lib.
Garis, R. L.
George Peabody Col. for Teachers
Vanderbilt Univ. Lib.
Van Sickle, J. V.

Norris

Howard, T. L.
Morrison, V. G.

Pressmen's Home

Garman, P. L.

Sewanee

Kayden, E. M.
Univ. of the South Lib.

TEXAS

Abilene

Hardin-Simmons Univ. Lib.

Alpine

Sul Ross State Teachers Col. Lib.

Arlington

Armstrong, A. B.
Behringer, E. N.
North Texas Agric. Col.

Austin

Allen, R. A.
Ayres, C. E.
Buechel, F. A.
Cox, A. B.
Cox, R. A.
Dolley, J. C.
Fitzgerald, J. A.
Hale, E. E.
Irons, W. H.
Lay, C. F.
Love, J. L.
Miller, E. T.
Montgomery, R. H.
Newlove, G. H.
Nieler, W. A.
Simmons, C. D.
Smith, E. G.
Stocking, G. W.
Stockton, J. R.
Texas Lib. and Historical Commission, State Lib.
Univ. of Texas Lib., Serials Acquisition
Winston, A. P.

Canyon

West Texas State Teachers Col. Lib.

College Station

A. and M. Col. of Texas, Agric. Econ. Dept.
A. and M. Col. of Texas, Dept. of Econ.
A. and M. Col. of Texas, Lib.
Hamilton, T. R.
Leland, T. W.

Dallas

Dallas Pub. Lib.
Fed. Res. Bank of Dallas Lib.
Hauhart, W. F.
Smith, A. A.
Southern Methodist Univ. Lib.

Denton

Jenison, E. S.
Lang, A. S.

North Texas State Teachers Col. Lib.

Texas State Col. for Women, Bralley Memorial Lib.

El Paso

Col. of Mines and Metallurgy Lib.

Fort Sam Houston

Hart, W. L.

Fort Worth

Carnegie Pub. Lib.

Texas Christian Univ. Lib.

Galveston

Rosenberg Lib.

Graham

Graham, M. K.

Houston

Clayton, W. L.

Gonzalez, R. J.

Houston Pub. Lib.

Rice Inst. Lib.

Univ. of Houston Lib., St. Bernard at Wheeler

Huntsville

Sam Houston State Teachers Col. Lib.

Kingsville

Texas Col. of Arts and Industries Lib.

Lubbock

Ellsworth, J. O.

Texas Tech. Col. Lib.

Nacogdoches

Stephen F. Austin State Teachers Col. Lib.

San Antonio

Murdoch, A. E.

San Antonio Pub. Lib.

San Marcos

Southwest Texas State Teachers Col. Lib.

Stephenville

John Tarleton Agric. Col. Lib.

Tyler

Texas Col. Lib.

Tyler Junior Col.

Waco

Baylor Univ. Lib.

Deupree, R. G.

Heimann, E. A.

Moore High School, 50 Clay Ave.

Waxahachie

Kerby, J. L.

Trinity Univ. Lib.

Wichita Falls

Kemp Pub. Lib.

UTAH

Cedar City

Branch Agric. Col. Lib.

Logan

Lee, M. W.

Murray, E. B.

Thorne, A. C.

Utah Agric. Col. Lib.

Ogden

Carnegie Free Lib.

Provo

Pond, A. S.

Salt Lake City

Adams, T. C.

Bearnson, J. B.

Fox, F. Y.

McConnell, Hunter J., Box 2183

Shields, T. K.

Thomas, G.

Univ. of Utah Lib.

Walker, D.

VERMONT

Bennington

Bennington Col. Lib.

Burlington

Briggs, L. L.

Groat, G. G.

Pond, A.

Univ. of Vermont Lib.

Middlebury

Fife, H. M.

Middlebury Col. Lib.

Patterson, J. H.

Prentice, J. S.

Rusby, P.

Montpelier

Meredith, L. D.

Nat. Life Ins. Co. Lib.

Vermont State Lib.

Northfield

Norwich Univ. Lib.

Norwich

Carter, W. A.

Peisch, A. M.

Poultney

Akerstrom, C. E.

Richmond

Heatherington, D. F.

Springfield

Flanders, R. E.

Winooski Park

St. Michael's Col.

VIRGINIA

Alexandria

Armstrong, F. A.

Burhans, N. C.

Engquist, E. J., Jr.

Johnson, G. G., Jr.

Lillaston, J. B.

Miller, P. L.

Myers, H. B.

Riley, D. C.

Ryder, O. B.

Stocking, C. A.

Arlington

Beckner, E. R.

Browne, A. E.

Caskey, W. F.

Colebank, A. W.

Custard, H. L.

Ecker-Rácz, L. L.

Elvove, J. T.

Ferger, W. F.

Gold, B.

Hanson, A. C.

Harris, M. D.

Jarrett, J. M.

Johnson, S. E.

Kantor, H. S.

Kidd, C. V.

Kube, H. D.

Lachmann, K. E.

Lee, H. H.

Lester, A. H.

McBride, J. W.

Meyers, A. L.

Mitchell, G. S.

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* Total
† Figure

TABLE I
MEMBERSHIP STATISTICS
1886-1939

Year	Annual	Life	Honorary	Total	Year	Annual	Life	Honorary	Total
1886				182*	1913	2,157	83	9	2,249
1887				300*	1914	2,060	81	8	2,149
1888				500*	1915	2,004	80	7	2,091
1889				†	1916	2,033	80	7	2,120
1890				635*	1917	2,077	87	6	2,170
1891				718*	1918	2,130	87	5	2,222
1892				†	1919	2,125	86	5	2,216
1893	482	73	17	572	1920	2,213	84	4	2,301
1894	484	72	16	572	1921	2,230	102	3	2,335
1895	485	71	16	572	1922	2,296	102	8	2,406
1896	479	74	15	568	1923	2,479	98	10	2,587
1897	477	71	15	563	1924	2,691	98	9	2,798
1898	488	69	14	571	1925	2,816	92	8	2,916
1899	498	68	12	578	1926	2,538	88	14	2,640
1900	541	69	11	621	1927	2,562	86	16	2,664
1901	722	67	11	800	1928	2,620	78	12	2,710
1902	782	67	11	860	1929	2,671	79	16	2,766
1903	757	67	11	835	1930	2,704	76	17	2,797
1904	792	67	11	870	1931	2,626	64	15	2,705
1905	800	66	11	877	1932	2,488	62	19	2,569
1906	794	66	11	871	1933	2,306	58	20	2,384
1907				1,002*	1934	2,433	54	19	2,506
1908				868	1935	2,473	53	18	2,544
1909				1,205	1936	2,556	48	17	2,621
1910	1,440	69	10	1,519	1937	2,652	44	17	2,713
1911	2,103	78	9	2,190	1938	2,764	41	19	2,824
1912	2,369	88	9	2,466	1939	2,906	40	20	2,966

* Total includes members and subscribers.

† Figures for these years not available.

TABLE II
MEMBERS AND SUBSCRIBERS FOR SELECTED YEARS

Year	Members	Subscribers	Total
1893	572	82	654
1902	860	151	1,011
1910	1,519	183	1,702
1920	2,301	565	2,866
1930	2,797	1,056	3,853
1935	2,544	1,118	3,662
1936	2,621	1,178	3,799
1937	2,713	1,219	3,932
1938	2,824	1,270	4,094
1939	2,966	1,292	4,258

NOTE: Some of the figures for earlier years have been estimated.

TABLE III
GEOGRAPHICAL ANALYSIS OF MEMBERS AND SUBSCRIBERS
(As of May 15, 1940)

State	Members	Subscribers	Total	State	Members	Subscribers	Total
NORTHEAST				SOUTHEAST			
Maine.....	12	5	17	Tennessee.....	28	17	45
New Hampshire.....	23	6	29	North Carolina.....	43	11	54
Vermont.....	13	7	20	Mississippi.....	3	7	10
Massachusetts.....	211	40	251	Virginia.....	89	15	104
Rhode Island.....	14	4	18	Kentucky.....	25	11	36
Connecticut.....	77	12	89	South Carolina.....	7	7	14
New York.....	635	111	746	Georgia.....	10	16	26
Delaware.....	9	4	13	Alabama.....	12	13	25
Pennsylvania.....	218	56	274	Arkansas.....	12	9	21
New Jersey.....	95	22	117	Florida.....	17	8	25
Maryland.....	58	14	72	Louisiana.....	32	12	44
West Virginia.....	7	10	17				
District of Columbia.....	314	38	352				
	1,686	329	2,015		278	126	404
MIDDLE				NORTHWEST			
Ohio.....	137	49	186	North Dakota.....	4	4	8
Michigan.....	67	30	97	South Dakota.....	2	7	9
Indiana.....	57	22	79	Nebraska.....	25	11	36
Wisconsin.....	51	18	69	Kansas.....	30	19	49
Illinois.....	264	53	317	Montana.....	6	3	9
Minnesota.....	49	31	80	Wyoming.....	3	4	7
Iowa.....	35	16	51	Colorado.....	28	7	35
Missouri.....	52	27	79	Idaho.....	2	3	5
	712	246	958	Utah.....	10	5	15
					110	63	173
SOUTHWEST				FAR WEST			
Oklahoma.....	15	16	31	Oregon.....	14	10	24
Texas.....	36	35	71	Washington.....	27	17	44
New Mexico.....	3	1	4	California.....	143	73	216
Arizona.....	5	3	8	Nevada.....	8	0	8
	59	55	114		192	100	292

SUMMARY

	Members	Subscribers	Total
Northeast.....	1,686	329	2,015
Middle.....	712	246	958
Southeast.....	278	126	404
Southwest.....	59	55	114
Northwest.....	110	63	173
Far West.....	192	100	292
	3,037	919	3,956

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The Mid-West Economic Association was founded in 1934, and has held annual meetings in April each year since. The programs begin Thursday evening and extend through Saturday forenoon. The area embraces Indiana, Illinois, Missouri, Kansas, Iowa, Nebraska, North Dakota, South Dakota, Minnesota, and Wisconsin. The organization is informal. Any person engaged in full-time teaching or research, or graduate study, or graduate study and research or teaching in the field of economics or commerce is eligible for membership. A registration fee of fifty cents is paid by those in attendance in lieu of a membership fee. There were 250 registrations in 1940. The Association sponsors no publication. The annual program is prepared and the place of meeting is chosen by the Executive Committee consisting of the President, two Vice-Presidents, Secretary, Treasurer, and the past president last holding office.

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The Southern Economic Association was organized in November, 1930, as the outcome of three annual Southeastern Economic Conferences. The purpose of the Association is the stimulation of economic thought and research in connection with the economic problems of the South.

Membership dues are \$3.00 a year for individuals and \$10.00 for institutions.

The *Southern Economic Journal* is a quarterly published jointly by the Southern Economic Association and the University of North Carolina. The Association subscribes for its entire membership. The Board of Editors is made up of E. M. Bernstein, of the University of North Carolina, T. C. Bigham, of the University of Florida, A. S. Keister, of the Woman's College of the University of North Carolina, M. C. Leager, of the North Carolina State College of the University of North Carolina, H. L. McCracken, of Louisiana State University, and E. Z. Palmer, of the University of Kentucky. G. R. Schwenning, of the University of North Carolina, is Managing Editor.

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The Pacific Coast Economic Association, under a somewhat different name, was established in 1922, largely through the efforts of Alfred C. Schmitt, Edwin C. Robbins, Stephen I. Miller, and Eliot Jones. The first meeting was held in Portland, Oregon. Membership is of two kinds: (1) institutional members, originally confined to accredited universities and colleges west of the Rocky Mountains, but now changed to include any educational institution approved by the Executive Committee, west of the Rockies; (2) individual members, who may be any person interested in the theory, principles and problems of economics and business. In addition to the professional economists, many Pacific Coast businessmen are members.

One of the principles of the P.C.E.A. is to devote approximately one third or more of each annual conference to problems of the Pacific Slope; another is to co-operate with the efforts of the Social Science Research Council.

There are at present 25 institutional and 198 individual members, representing 37 collegiate institutions. Institutional dues are \$10.00 and \$5.00, depending upon size of the institution; individual membership is \$1.50 yearly. The principal publication is the annual proceedings.

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American Economic Association

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December, 1941

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of the

Fifty-third Annual Meeting

of the

American Economic Association

New Orleans, Louisiana, December, 1940



Edited by the Secretary of the Association



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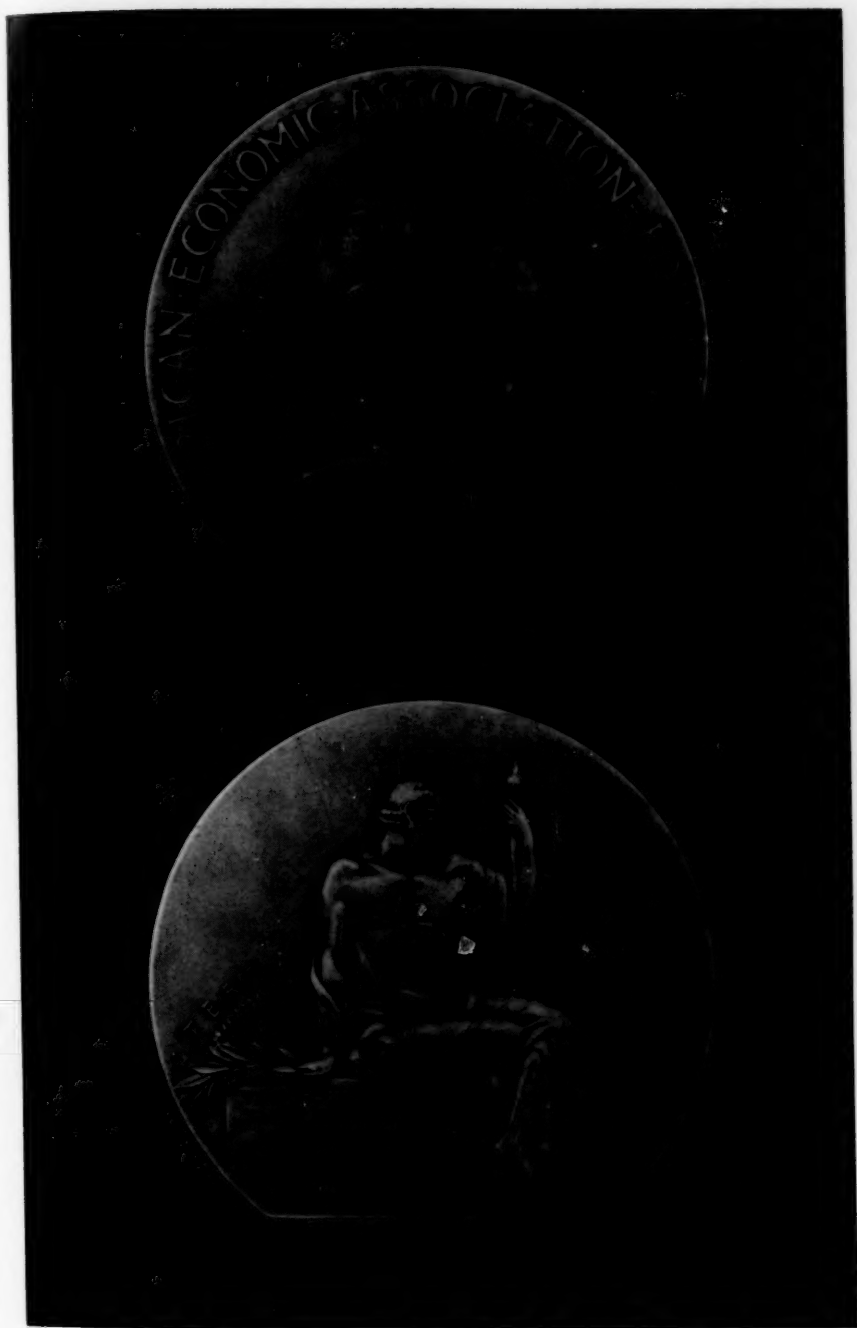
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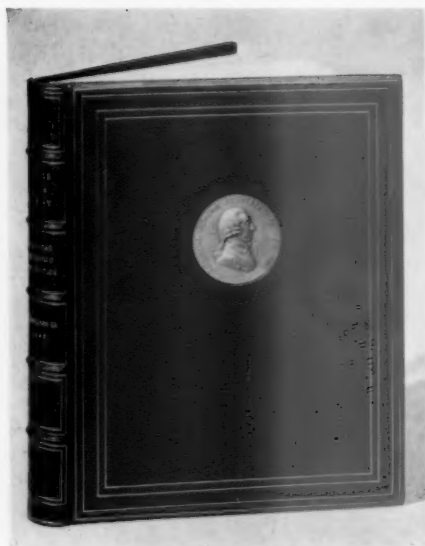
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Top: Obverse of medallion inset in front cover of Dewey Testimonial Volume.
Bottom: Reverse of above.



Dewey Testimonial Volume.



Title page.



Inside front cover showing reverse of medallion.



Davis Rich Dewey, retiring editor of the American Economic Review, has for thirty years discharged exacting duties and responsibilities in a notably able manner, and Whereas, He has, by his interest and the generous devotion of his talents, aided in directing the activities of the American Economic Association to paths of broader usefulness, and

Whereas, Individually and as an organization, we have for a period of fifty-five years benefited from the association and fellowship of an eminent and esteemed scholar; therefore be it

Resolved, That we recognize this full life of distinguished achievement by expressing our heartfelt thanks for the signal service he has rendered and our appreciation of the lasting influence which he has exerted in behalf of the development of economics as a science in America; and be it further

Resolved, That this tribute be inscribed in the minutes of this meeting and a copy be engrossed in appropriate form and presented to him as a testimonial of our esteem and affection.

*Adopted at the
American Economic Association Business Meeting
December twenty-eighth, nineteen hundred forty.*

Resolution adopted at the American Economic Association Business Meeting, December 28, 1940.



Dewey Dinner

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With a sense of deep appreciation,
we acknowledge by our signatures
the debt of gratitude due to one
whose fine impartiality and wise
understanding have won him the
affection and respect of all who have come
within the orbit of his influence.

John H. Biggs	Robert A. Little	Jacob Viner
Henry C. Bickell	Frederick D. Burr	Wm. F. Johnson
Erving Fisher	Wendell C. Smith	Ray B. Livingston
W. A. Sprague	Ray B. Slakey	Richard L. Lupton
Wm. H. Adams, Jr.	Joseph M. Weller	Samuel C. Smith
Calvin B. Moore	Al B. Lupton	Harold P. Papp
Henry C. Taylor	Mr. K. K. K. K.	Earl J. Hamilton
John D. Black	Wm. W. Williamson	Paul S. Newman
W. T. Stewart	James C. Goodrich	Charles F. Davis

Littera scripta manet



DEWEY DINNER AND TESTIMONIAL

On the four-page insert are reproduced photographs of the medallion and the testimonial volume presented to Dr. Davis Rich Dewey, retiring editor of the *American Economic Review*. The presentation was made at a dinner held in the Crystal Room of the La Louisiane Restaurant, New Orleans, December 28, 1940. President Frederick C. Mills served as Toastmaster and addresses were delivered by Jacob Viner, A. B. Wolfe, Paul T. Homan, Wesley C. Mitchell, James Washington Bell, and Dr. Dewey. Dr. Dewey's remarks are published immediately following.

The three-inch bronze medallion, of which the illustration is made to scale, was cast by the Medallion Art Company, of New York.

The obverse represents the head of Adam Smith by Tassie, the only contemporary, authentic likeness of the great economist. Of the two original Tassie medallions which remain one is found in the famous collection of the National Gallery in Edinburgh; the other in the Jacob Hollander library. This likeness of Adam Smith has been made familiar by reproductions in jasper by Wedgwood and by steel engravings found in the McCulloch editions of the *Wealth of Nations*.

For some years the Executive Committee has considered using this portrait of Adam Smith as an appropriate design for our corporate seal. However, many have objected to the proposal on the grounds that the American Economic Association has no particular claims on the "father of modern economics" and his none-too-familiar portrait, and it was hoped that a more distinctive American symbol could be found which would be more generally acceptable to our membership. Hence, in working out a design for the Dewey medallion we sought at the same time a device or symbol which might be adapted to serve as an appropriate representation of economics and as a seal of the Association.

The design of the reverse of the medallion portrays symbolically the fundamental and all-pervading science of economics. The complicated elements constituting this science are brought together in the massed symbols of the conventional factors of production representing land, labor, capital, and entrepreneurship. Natural resources of the land and of plenty are expressed by the spread of the conventionalized wheat sheaves; organization and the contribution of labor and capital are suggested as a functioning entity by the cog wheels of industry. The all-important activities of man, namely, direction of production on the one hand and the satisfaction of human wants on the other, are difficult abstract qualities to capture. They are represented by the fine scholarly figure portraying Wisdom or Experience, seated on the solid base, holding in one hand the torch of Research and in the other the laurels of Achievement. Rene Chambellan, the sculptor, well known for his work in symbolism and in abstractions, has managed

to sublimate, as it were, a complex and vast field of endeavor in a simple manner.

The inscription on the pedestal—*Viro Eruditissimo Davis Rich Dewey Debitum Solvit Libens Merito Oeconomica Societas Americana*—freely translated, reads: "To the scholarly man, Davis Rich Dewey, the American Economic Association pays its debt, gladly, deservedly."

The testimonial volume, bound in handsome green Turkish Morocco leather, contains five illuminated pages and 150 personal letters from past presidents, members of the executive committees and editorial boards. The volume, with slip cover bound to match, was produced by the Monastery Hill Bindery, of Chicago, and represents a fine example of the bookmaker's art.

The dedication page, the minute of the Association, the Dewey dinner title page, the testimonial inscription signed by those attending the dinner, and the vignette—*Littera Scripta Manet*—introducing the section of personal letters are reproduced in letterpress print from half tone.

JAMES WASHINGTON BELL, *Secretary*

Postscriptum

The following letter was received as these pages were going to press and is added to this account as a fitting response to those who have contributed to the testimonial volume:

My dear Professor Bell:

When at New Orleans I received from your hands the Book of Letters, I had little opportunity to read the many tributes of regard and affection which the writers contributed. Now that the volume has arrived at my home and I have had leisure to turn its pages, I find it difficult to reconcile these tributes with my own personality. Am I the Davis R. Dewey to whom they are addressed?

To live up to the pattern which they have imaged places a heavy burden upon me for the years which I have left, and I wish I could live my life over again in the hope that I could strive more faithfully to justify the appreciation so generously given.

I shall not be able to acknowledge each of these letters separately, but I should like to record my gratitude to all my friends throughout the Association.

Greetings to all of you.

Yours sincerely,

DAVIS R. DEWEY

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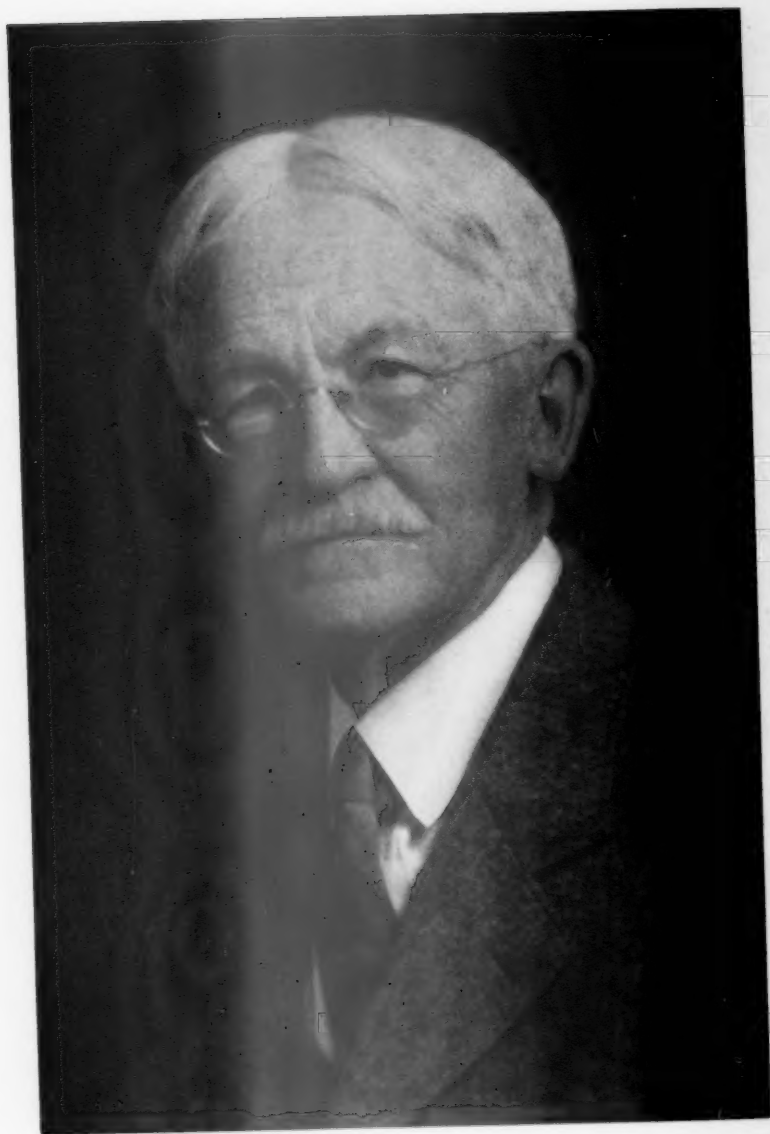
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Davis R. Dewey



REMARKS OF DAVIS RICH DEWEY AT TESTIMONIAL DINNER

Your tribute has been so overwhelming that I find it difficult to speak. However, in order to restore my tranquility I shall tell a story.

A Vermont farmer was leading a calf along a road until they came to a bridge. There the calf balked. An automobile came along, but the calf blocked the way. Finally the farmer said to the chauffeur, "If you will toot the horn maybe the calf will move." The chauffeur blew the horn and the calf jumped clear off the bridge into the water and was drowned. The farmer said, "What did you do that for?" The chauffeur replied, "You told me to blow." "Yes," said the farmer, "but wasn't that a hell of a big toot for a little bit of a calf?"

My brief remarks will be divided under five headings: (1) grace or thanksgiving; (2) confession or apologia; (3) sermon; (4) ordination of my successor; and (5) benediction. Five points may seem a formidable program; but let me assure you that long training has made me an expert in the art of condensation. I once successfully condensed a federal public document to 1,228 pages.

1. *Thanksgiving.* During the past few years it has been customary in my part of the country for a merchant, in signing his receipt to a paid bill, to add in his own penmanship three words: "I thank you." This phrase has become so stereotyped that it seems commonplace; and yet what more can I say in expressing my appreciation of the honor you have tendered me? But my thanks are for more than this banquet. I have owed you for a most enjoyable task extending over many years. When I assumed the duties of managing editor, I was past middle age and had settled down to the routine of teaching undergraduate students. I had no graduate students with whom I could soar into distant stratospheres where dynamic principles seem to contradict those which operate upon this lowly earth. Although I had no competency for empyreal flights, I enjoyed and even envied the tales which these aeronautical economists, with their helical ascents, brought back. A few of these are nose-divers as well, and I have read with some satisfaction that these nose-divers, in pulling out from the dive, have a rush of blood from the head to the feet and the flyer often blacks out into unconsciousness. In this way you have supplemented the pleasures of my later life; and for this I again give you my most hearty thanks.

2. *Apologia.* Somewhere in my correspondence with officers of the Association, I read an announcement that a dinner would be given in honor of one of the founding fathers of the Association. In order to keep my record clear, I should like to qualify the title "founding father." I was a member and attended the first meeting of the Association; but I had nothing to do with the founding of the Association beyond paying the modest dues and railroad fare for attendance.

For three years I had been a pupil of Dr. Ely at Johns Hopkins University, and it could not be expected that I would reject the blandishments of my enthusiastic teacher. I was a trailer rather than a founder. There were other trailers as well; but the good fortune of advancing age has put me in a unique position now shared by but few. Now that I am separated from the *American Economic Review*, I am rather a foundling than a founder.

When I was invited to undertake the managing editorship of the *American Economic Review*, I demurred, partly on the ground that I did not read easily foreign languages. The chief qualification I possessed was that I had edited the quarterly of the American Statistical Association during its first fifteen years. Fortunately, French and German statistical tables could be easily deciphered. It was far otherwise with the journals conducted by Schmoller and Conrad. I was, however, assured that the Association wished to publish an *American* economic journal and that my objection was not an outstanding defect.

Again I demurred on the ground that my chief interest was in American economic problems and not in the refinements of economic theory. My acquaintance with theory was limited to some knowledge of Adam Smith, John Stuart Mill, Karl Marx, and Francis A. Walker. I had tried to keep pace with the newer Marshallian analysis and to reconcile the reasoning of the Austrian school with the antiquated concepts of pre- and mid-Victorian economists. And such economics as I had imbibed was imbedded in a thick layer of Vermont G.O.P. Thus you can see that I was but poorly qualified to assume the editorial responsibilities which the year 1910 demanded. My shortcomings in theory were met by the answer that the *Quarterly Journal of Economics* ably took care of theory.

Under these assurances I undertook the editorship, and, thanks to your forbearance, have continued it for a long stretch of thirty years.

It may not be inappropriate to review briefly some of the factors which have guided me in this service. Controlling this activity have been financial considerations. It is easy to spend money but the income of the Association has been limited. I determined at the outset that the Association would never be plunged into debt through expenditures for the *Review*. Only when the treasurer's report showed a surplus of receipts over outgo did I feel justified in asking for a larger appropriation.

The avoidance of debt is a comparatively easy problem to solve, for if you do not spend money, you can prevent this liability. There were other questions more difficult to answer. I refer specifically to the content of the journal. For this I was given no instruction or even a particle of advice. In 1910 there were five outstanding journals which published leading articles on economic subjects and reviews of economic books. All of these were under the patronage of individual academic institutions.

Was it desirable to establish a sixth journal along lines similar to those

referred to? And, if not, how could a new journal be made different? I had no clear answer, but believed that, if possible, the new *Review* should serve as a working tool for the hundreds of graduate students who were on their way to becoming teachers of economics; and secondly that the *Review* should be the organ of the members of the Association rather than the organ of the editors.

At that time there were less than 2,000 members and subscribers of the Association, and these supported the activities of the Association by their annual dues. How far were they entitled to a forum for expressing the results of their studies and the opinions which they had reached? Or should they cheerfully accept the contributions initiated by a small board of editors? This has been a puzzling problem. I have never settled it definitely in my own mind, and I have followed a wavering policy. With the aid of successive boards of editors, effort has been made to maintain a high level of scholarship, and at the same time to widen the field of contributions not only by the more mature scholars but by the younger men in the smaller institutions.

I have referred to the successive boards of editors. Too much praise cannot be given to their patient and time-consuming appraisals. A large part of the tribute which you are paying me should be bestowed upon them. They have been my ghost writers, and due credit should be given to their gratuitous service.

There is another ghost worker behind the scenes to whom credit should be given; namely, my office assistant for fifteen years, Miss Rogers. She has saved many a contributor from mortifying grammatical mistakes; and she does not know what time means.

3. *Sermon.* I now come to the sermon, which I hope will not be out of place. For thirty years I have been occupied in reading manuscripts and giving hasty and regrettably only a superficial consideration to the thousands of volumes published in our field of study. These volumes may be roughly divided into two classes: (1) factual studies or reports of investigations; (2) speculative and theoretical discussions of the working of economic principles or laws.

With the first class I have no concern. They are all welcome, for they furnish the data needed for the second class. It may be that some of the authors of this first class are not necessarily economists in the true sense of the term. They are machinists who do the mechanical work for the engineers.

My special interest is in the authors of the second class. What is the competency of writers on economic theory; and what sort of training have they had to warrant their prescriptions for social welfare? Have they some sort of certificate which warrants the appellation "economist"?

Now it must be recognized that our universities have attempted to solve this question of certification by laying out courses leading to a doctoral degree, and there is a growing tendency for administrative officers to demand this certification as a price for appointments.

This brings us face to face with the character and quality of the Ph.D. degree in the field of economics. Does this degree represent the accumulation of a certain number of credits in detached or scattered economic subjects, supplemented by a so-called research termed a thesis; or does it represent a ripening of scholarship in the wide expanse of economic life?

Is not the curriculum for the Ph.D. degree frequently too strictly confined to economic subjects, and should it not include a larger proportion of history, politics, psychology, philosophy, and jurisprudence? Is not a knowledge of American and foreign constitutional history an absolute requisite for understanding and interpreting the working of economic principles? If there were this knowledge, it seems to me that some of our economic theorizing and writing would be more effective.

I am not reflecting upon the scholarship of the present holders of the doctorate degree in economics, but I sometimes wonder whether there is not a tendency to narrow the preparation too strictly to the economic field.

4. *Ordination of my successor.* May I now give a few words of advice to our new managing editor?

1) Be sure to have one article containing involved mathematical equations with unusual fonts of type. Inasmuch as the printer has to spend a good deal of time in ransacking the type foundries of the country, this affords you a good excuse for a delay in publication.

2) Be sure that a majority of the leading articles contain at least six references to Keynes. Adam Smith, John Stuart Mill, Marshall, Francis A. Walker and their contemporaries are now passé. And it is your duty to see that the articles you select do not burden the readers with reasoning which has been outmoded.

3) Publish at least one review in each issue which will arouse the animosity of the author. There is nothing more stimulating than controversy. Is not controversy the essence of that much debated theme, democracy?

In a recent address at Cornell University, Professor Carl Becker reminded his audience of a German saying that a professor was a man who thinks "otherwise." As I look back over the *Review* I am inclined to think that this definition fits many of the contributing writers for the *Review*. There is a great deal of "otherwise" opinion. Some of the leading articles may be so characterized; and a reviewer appears to think that no matter how favorable his review is he has not fulfilled his duty unless he injects an "otherwise" qualification.

4) Be sure to have occasionally an article contain fifty-cent and one-

dollar words. Though difficult to understand, such an article commands respect; and economists in these days need respect.

I have already referred to the financial limitations. These limitations do not mean that a better *Review* cannot be published without putting a strain on the current budget. Age becomes casehardened and overconservative. I welcome the change to youth, and commend my successor to the same generous support which you have given me.

And now, Professor Homan, I hand you the insignia of my office, a blue pencil.

5. *Benediction*. Finally, the benediction; fortunately a benediction is always short. May the blessings of wide scholarship and sound reasoning attend the remaining years of your lives.

Ordinarily in the closing days of an old year I should wish you a happy new year. In the midst of a world welter of suffering the word "happy" seems almost a mockery. I can at least wish you a better year.

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PROGRAM OF THE FIFTY-THIRD ANNUAL MEETING

The program of this year's meeting has been centered around one main theme and four minor ones.

A series of six related meetings were held on a half-dozen selected economic problems of current, vital interest; e.g., gold and the monetary system, the federal budget and economic consequences of deficit financing, agriculture, private investment in the American economy, unemployment, and the United States in the world economy. During the past decade, this country has faced these problems, and they take on new urgency under the pressure of war abroad and the defense program at home. They are treated analytically in retrospect and prospect. Main papers and reviews of these sessions are published in full. Three sessions, although not part of the nucleus, dealt with cognate subjects; e.g., economic consequences of war since 1790, the luncheon meeting papers on economic problems of war, defense, and postwar reconstruction, and price policy and price behavior. Selected papers from these sessions are published in full.

Other sessions were held on economic research, the problems of economic regionalism, the teaching of economics, and the commemoration of the semicentennial of the publication of Alfred Marshall's *Principles*. A summary of the sessions on economic research has been prepared by Professor Homan, and likewise a summary of the papers on the teaching of economics is contributed by Professor Blodgett. The papers on Marshall will appear in the *Review*. Papers on economic regionalism will be published in the *Journal* of the Southern Economic Association.

All sessions were held jointly with the Southern Economic Association.

Friday, December 27, 1940

10:00 A.M.

1. *Gold and the Monetary System* (Joint session with the Econometric Society)
Chairman: O. M. W. Sprague, Harvard University
Papers: Hans P. Neisser, University of Pennsylvania; Charles O. Hardy, Brookings Institution
Discussion: Fritz Machlup, University of Buffalo; William Adams Brown, Jr., Brown University

2. *Round Table on Economic Research I*

Chairman: Paul T. Homan, Cornell University

Papers: Carl F. Remer, University of Michigan; Harold G. Moulton, Brookings Institution; Edward S. Mason, Harvard University; John H. Cover, United States Bureau of Foreign and Domestic Commerce; Morris A. Copeland, Central Statistical Board

12:00 M. Meeting of the Executive Committee

2:30 P.M.

1. *Causal Factors in Economic Regionalism*¹

Chairman: Esmond Phelps, Tulane University.

Papers: Joseph J. Spengler, Duke University; Melvin G. de Chazeau, University of Virginia

Discussion: Robert W. Elsasser, Tulane University; Truman C. Bigham, University of Florida

2. *Round Table on Economic Research II*

Chairman: Paul T. Homan, Cornell University

Papers: Edwin G. Nourse, Brookings Institution; Joseph H. Willits, Rockefeller Foundation

Summary: J. Frederic Dewhurst, Twentieth Century Fund

8:00 P.M. Presidential Addresses

Chairman: Roger P. McCutcheon, Tulane University

Papers: Frederick C. Mills,² American Economic Association; John B. Woosley, Southern Economic Association

Saturday, December 28, 1940

8:45 A.M. Business Meeting

9:30 A.M.

1. *The Federal Budget: Economic Consequences of Deficit Financing*

Chairman: A. B. Wolfe, Ohio State University

¹ To be published by the Southern Economic Association.

² To be published in the March issue of the *American Economic Review*.

Papers: John H. Williams, Harvard University; Bernard F. Haley, Stanford University

Discussion: Dan T. Smith, Harvard University; Lawrence H. Seltzer, Wayne University

2. *Round Table on the Problems in the Teaching of Economics*

Chairman: Ralph H. Blodgett, University of Illinois

Papers: Clifford L. James, Ohio State University; Leland J. Gordon, Denison University; Kenneth M. Spang, Yale University

Discussion: George J. Stigler, University of Minnesota; H. L. McCracken, Louisiana State University

2:00 P.M.

1. *The Agricultural Situation: A Review of Fundamental Factors, An Evaluation of Public Measures, and An Appraisal of Prospects* (Joint session with the American Farm Economic Association)

Chairman: W. I. Meyers, Cornell University

Papers: Howard R. Tolley, United States Department of Agriculture; T. W. Schultz, Iowa State College

Discussion: John D. Black, Harvard University; B. H. Hibbard, University of Wisconsin

2. *The Status and Role of Private Investment in the American Economy, 1940*

Chairman: Harold G. Moulton, Brookings Institution

Papers: Theodore J. Kreps, Stanford University; Richard M. Bissell, Jr., Yale University

Discussion: Oscar L. Altman, National Resources Planning Board; Imre de Vegh, of Scudder, Stevens and Clark

7:00 P.M. Testimonial Dinner to Davis Rich Dewey

Toastmaster: Frederick C. Mills, Columbia University

Addresses: Jacob Viner, University of Chicago; A. B. Wolfe, Ohio State University; Paul T. Homan, Cornell University; Wesley C. Mitchell, Columbia University; James Washington Bell, Northwestern University

Sunday, December 29, 1940

4:00 P.M. Tea for Members and Their Families

8:00 P.M.

*The Economics of Alfred Marshall: A Semicentennial Review*³ (Joint session with the Econometric Society)

Chairman: Wesley C. Mitchell, Columbia University

Papers: Jacob Viner, University of Chicago; Joseph A. Schumpeter, Harvard University

Discussion: Frederic B. Garver, University of Minnesota; William Jaffé, Northwestern University

10:00 P.M. Smoker

Joint smoker with the Econometric Society, with informal talks, immediately following the Alfred Marshall session

Monday, December 30, 1940

8:45 A.M. Business Meeting

9:30 A.M.

1. *Unemployment in the United States, 1930-50*

Chairman: J. Douglas Brown, Princeton University

Papers: Paul Webbink, Social Science Research Council; Oskar Morgenstern, Princeton University

Discussion: Isador Lubin,⁴ United States Bureau of Labor Statistics; E. Wight Bakke, Yale University

2. *Economic Consequences of War Since 1790* (Joint session with the Economic History Association)

Chairman: Earl J. Hamilton, Duke University

Papers: Henry M. Oliver, Yale University; Willard L. Thorp, Associated Gas and Electric Corporation

Discussion: Wesley C. Mitchell, Columbia University; E. A. J. Johnson, New York University

³ To be published in the *American Economic Review*.

⁴ No manuscript received.

Program of Fifty-third Annual Meeting

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12:15 P.M. Luncheon Meeting

Some Economic Problems of War, Defense, and Postwar Reconstruction

Chairman: Joseph H. Willits, Rockefeller Foundation

Papers: Arthur Upgren, University of Minnesota; Theodore O. Yntema, University of Chicago and Cowles Commission; A. Loveday,* League of Nations

3:00 P.M.

1. *The United States in the World Economy, 1940: International Economic Relations and Problems of Commercial Policy*

Chairman: Dudley F. Pegrum, University of California at Los Angeles

Papers: P. T. Ellsworth, University of Cincinnati; Leo Pasvolsky, United States Department of State

Discussion: Otto Nathan,* New York University; Ernest M. Patterson, University of Pennsylvania

2. *Price Policy and Price Behavior*

Chairman: Edgar Z. Palmer, University of Kentucky

Papers: James C. Bonbright, Columbia University; Walter F. Crowder, United States Department of Commerce (paper prepared jointly by Willard L. Thorp and Walter F. Crowder)

Discussion: Donald H. Wallace, Williams College; George J. Stigler, University of Minnesota

THE purpose of the American Economic Association, according to its charter, is the encouragement of economic research, the issue of publications on economic subjects, and the encouragement of perfect freedom of economic discussion. The Association as such takes no partisan attitude, nor does it commit its members to any position on practical economic questions. It is the organ of no party, sect, or institution. Persons of all shades of economic opinion are found among its members, and widely different issues are given a hearing in its annual meetings and through its publications. The Association, therefore, assumes no responsibility for the opinions expressed by those who participate in its meetings.

JAMES WASHINGTON BELL

Secretary

GOLD AND THE MONETARY SYSTEM

(Two main papers and two review papers)

THE PRICE LEVEL AND THE GOLD PROBLEM¹

By HANS P. NEISSER
University of Pennsylvania

I

During the last two decades the discussion of the gold standard has been misguided by the experience of the standard's classical period, 1850-1914, and even more, by the wrong interpretation of this experience. If analyzed with the ingenious statistical methods of Cassel and his followers (particularly Kitchin and Woytinsky), the experience seemed to prove that the gold supply governs the trend of the price level. This proposition contains for the period in question an element of truth. But it has not been sufficiently recognized that this effect of the gold standard has been conditioned on a peculiar structure of the demand for credit, which, as we know at least now, is not an immutable inherent property of our present economic system. The stock of metallic money can exercise a decisive influence on prices only if the volume of bank credit possesses a long-run tendency to rise as far as possible; i.e., to press against the limits set by the metallic stock. It was the mistake of the Cassel school to assume that this long-run tendency would characterize the economic system in the period after the World War as it had done before. Moreover, Cassel's proposition, though explicitly referring to gold and the trend of prices, has been confused (1) with the question whether the (cyclical) price change in a given year can be attributed to the scarcity and abundance of gold, and (2) with the devaluation problem; namely, whether a devaluation would cause an immediate and commensurate rise in the domestic price level.

Partly this confusion has been caused by a misinterpretation of the events of the period 1850-1910. The neglect of silver, and even more important, that of bank credit expansion, is rather astounding. Here I may summarize the results of some supplementary statistical investigations as follows:

1. The long wave in the general price trend 1850-1910, with a top in the middle of the seventies and a trough in the middle of the nineties, is, indeed, attributable to the vagaries of the gold production and the demonetization of silver.
2. However, the amplitude of this long wave in prices is much smaller than the simultaneous wave in the "relative gold stock" and conforms better to the stock of gold and silver combined. The term relative gold stock denotes the deviations from the normal gold stock computed as a compound interest trend.

¹ I am indebted to Prof. C. R. Whittlesey for valuable suggestions.

3. The trend of the general price level was raised, more and more, above the trend of this combined relative stock by the expansion of credit money.

Cassel and his school unduly focused attention on the first proposition. It was the neglect of the third proposition which created the misinterpretation of the role of gold in the postwar period. We shall call the ratio of the money flow (per time unit) to the metallic stock the efficiency of the latter, covering at the same time the fiduciary circulation and velocity. Then we can say: from 1850 to 1910 a long wave in the (relative) metallic stock, combined with a uniformly rising trend in the efficiency of the stock, created a somewhat damped wave in the general price trend. For the postwar period, we state: the combination of a uniformly downward trend in the relative gold stock and of an (incompleted) cycle in the efficiency of the stock created a wave in the general price level; the price level rose till the end of the twenties (though less than the efficiency) and showed a downward tendency afterwards. However, the decisive factor in this development is now not the metallic stock, but the cyclical movement in efficiency; i.e., the expansion and contraction of credit money and of velocity. Even if the gold stock had kept on the level of Cassel's normal stock, the price trend would not have been considerably different.

Some comments on these statements are in order. First as to the downward trend of the relative gold stock: For the twenties it is manifest, from the comparison of the trend in production and volume of trade (2 to 3 per cent, according to Mr. Snyder's statistics²) on the one hand, and from the average annual increase of the monetary gold stock on the other hand (1.8 per cent to 2 per cent).³ Much more difficult is the question whether the downward trend of the relative gold stock would have persisted through the thirties, or whether, on the basis of an unchanged price of gold and an unchanged cost price level in gold production, the monetary

² The trend values 1920-29 (which agree rather closely with the observed values) show a rate of increase per annum of 4 per cent for the United States and of 1.4 per cent for England; the average for the Western World (where production was not affected by falling prices, in the period concerned) must lie between 2 and 3 per cent. I use the opportunity to express my thanks to Mr. Carl Snyder, who kindly furnished me the numerical data for the numerous charts published by him in various papers.

³ Kitchin's figures for the monetary gold stock (end of the year) show, for 1919-29, a rise of almost 2 per cent per annum, and, for 1921-29 (omitting the unusual years 1920 and 1921) of 1.8 per cent.

It is true that during the World War central gold reserves were considerably increased by the withdrawal of gold from circulation. However, no extra reserve was created, which could have supported by itself a monetary expansion. L. Edie (in *Gold, Production and Prices Before and After the World War*, Indiana University Studies, No. 78, March, 1928, p. 71) showed that this extra supply would do no more than support price level of 37 to 45 per cent above the prewar level, while it is usual to take as trend value for the beginning of the twenties the level of 150 per cent. It must be noted that there is no way to work out, by Cassel's methods, the price trend level at that time because the period 1919-31 is much too short, and the period 1850-1931 is interrupted by the World War, which vitiates the assumption, underlying Cassel's method, of a uniform rate of increase in the trend of production and turnover. Nor will future historians be able to compute, retrospectively, a trend, because of the structural change in the beginning of the thirties.

gold stock would have increased at a normal rate; i.e., by at least 2.5 per cent per annum. The League of Nations prediction (*op. cit.*, page 12) of a considerable decline in the current gold output has been disputed by Hardy.⁴ But granted even that, owing to a combination of favorable circumstances, the gold output in South Africa had remained constant (as Hardy visualizes as the most favorable outcome to be expected at the end of the twenties), can we assume that, other things being equal, the world output would have risen to such an extent that an annual increase of 2.5 per cent in the gold stock would have been secured? The current output of 1929, if maintained through the thirties, would not have sufficed. Much more would have been required; namely, an increase in the annual world's output of gold of 4.1 per cent per annum (or, on the average, 30,000 kilograms per annum),⁵ while the actual growth of output from the low of 1922 till 1929 was only 3.4 per cent per annum (or 18,000 kilograms). On the basis of such a hypothesis, I do not feel justified in disputing the thesis of a downward trend in the relative gold stock.

It is true that the actual output figures in the thirties have exceeded all estimates. But they cannot be quoted as counter argument, because the actual output since 1931 has resulted from (1) the very price fall which the Cassel school predicted as a consequence of the gold scarcity and (2) the increase in the sterling and dollar price of gold, caused by the prolonged price fall after 1929,⁶ a change in institutions which cannot very well be used to refute predictions of a price trend expressly made on the basis of existing institutions.⁷

On this downward trend of the relative gold stock, there was superimposed, as pointed out above, a cycle in efficiency. Proof for the pronounced increase in efficiency are figures of clearing house turnover if compared with the rate of increase in the gold stock, or even in the physical volume of production. In Germany, where before the World War the use of check payments was not widely employed, expansion of credit money is most conspicuous in the rise of the postal checking system. For England and the United States we give the rate of increase in clearing house figures respecting debits to individual accounts, duly allowing for the change in the price level when comparing prewar and postwar figures. As a conse-

⁴ C. O. Hardy, *Is There Enough Gold?* (1936), especially page 61.

⁵ Assuming a non-monetary demand of 180 million dollars per annum.

⁶ As Mr. F. W. Paish in "Causes of Changes in Gold Supply," *Economica*, November, 1938, has shown, cost prices in South African mining are rather sticky and not much affected by the fall in the world price level; it was the increase in the sterling price for gold which caused a rapid rise in output. Likewise, it can be said that both the decline of industrial consumption of newly mined gold and Indian dishoarding of gold would have been much smaller had the sterling and dollar prices of gold remained the same. (See, also, P. S. Brown in the *Journal of Political Economy*, April, 1938.)

⁷ I do not intend to deny that it is within the province of economics in the wider sense (Marshall's "economic biology" in contrast to the "economic analysis") to discuss the change of economic institutions.

CLEARING HOUSE FIGURES FOR DEBITS TO INDIVIDUAL ACCOUNTS

	Annual Rate of Increase	
	1913-22	1922-29
United States	6.8% per annum	7.5% per annum
England	2.7	3.9

quence, the commodity price level did not fall substantially till 1929, while the general price level rose.

After 1929 the fundamental change occurred in the structure of the demand for credit, which we touched upon before. While in the preceding era, the volume of bank credit, considered as trend phenomenon, had pressed against the limit set by the metallic circulation, now the demand for credit slackened even in times which cannot be regarded as cyclical depression; i.e., excess reserves became a trend phenomenon.

We must not blame on gold, therefore, the crisis of 1929 and the subsequent fall of prices. The gold scarcity has never been a decisive factor in the postwar era. Until 1929 it was more than offset by the rise in efficiency, and afterwards, even when the cyclical shock of the crisis had been overcome, the actual volume of bank credit never exhausted the potentialities of expansion as indicated by the gold stock. This conclusion is confirmed by the positive analysis of the causes of the crisis of 1929 which I have attempted at another place,⁸ and which the subsequent investigations of Slichter and Tinbergen have corroborated.

To put it briefly, the crisis originated in the United States and was aggravated by the reaction of the financial system in France. Both are countries, however, which had a surplus of gold. The third inflammatory focus of the depression, Germany, came into a critical situation because of the shrinkage of capital imports since 1928, which certainly cannot be attributed to gold scarcity. The so-called "maldistribution" of gold, which replaces, in the opinion of some economists, the gold scarcity as major cause of the breakdown, should not be mentioned in the same breath. It cannot be considered as proper cause of any event but only as a symptom pointing to the real forces governing international trade and finance. Once the gold standard is established, the supply of gold is largely a datum in the theoretical framework, while the distribution of gold is a resultant.

These disrupting forces of the crises would not have been stopped by an increase of the gold output up to the Casselian *normal rate*. For though a 3 per cent rate would not have sufficed to turn the tide, a multiplication of the output, large enough to defray reparation and war debt payments, might have done the trick, particularly if one dreams of gold mines in Germany, England, France, and so on. It would not be fruitful to follow this line of thought further and to work through the maze of complications inevitably arising from such a hypothesis.

⁸ *Some International Aspects of the Business Cycle* (Philadelphia, 1936).

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II

From the preceding analysis, it becomes clear that the role of gold in governing prices would have been entirely different from the past, even if the gold standard had not been abandoned. To give a complete history of the different phases of the development in which new standards were established, is beyond the scope of this paper. We shall subject, first, the American devaluation experiment of 1933 to a brief analysis, because it still seems to occupy the imagination of the public. Afterwards we shall turn to the most recent phase of monetary history, on the basis of which we may dare to judge the future.

First the devaluation! It is necessary to differentiate carefully two sets of questions: (1) What was the effect of devaluation on dollar prices? (2) What was the effect on world market prices in terms of gold? For each question, we have, in turn, to distinguish the immediate effects from the effects in the longer run; for the latter, a further differentiation into cyclical and trend effects is not necessary. Since the dollar had a fixed gold content after 1933, the longer-run discussion of the dollar prices covers largely also the world market prices in terms of gold.

The validity of distinctions like the preceding will be disputed by the adherents of what may be called the "utility version of the commodity theory of money." I mean the old banking school approach, in which the relation between commodity prices and gold is laid down independently of the quantities involved. This theory has been restated rather forcefully in this country by the late Professor Laughlin,⁹ and may have influenced, originally, writers like Warren and Pearson. According to the banking principle, bank credit and bank deposits do not affect the commodity price level as under the gold standard. Money of any kind, including so-called "substitutes," is equivalent to gold, the price of a commodity is considered as expressing the utility of the good as compared with the utility of gold, and since this comparative estimate would not be affected by a mere reduction of the gold content of the currency (e.g., dollar) people will be willing to give, after the devaluation, for one unit of the commodity as much gold as before; i.e., correspondingly more dollars. To all who are inclined to ridicule this argument, I must point out that there is a basic theorem in general theory which, at the first glance, seems to bear out Laughlin's contention. It states that the prices of two goods stand in the same relation as their marginal utilities:

$$\frac{\text{Marginal utility of commodity}}{\text{Marginal utility of gold}} = \frac{\text{Dollar price of commodity}}{\text{Dollar price of gold}}$$

⁹ J. L. Laughlin, *A New Exposition of Money, Credit and Prices* (1931) II, 688 ff., especially p. 700: "there is a direct comparison, in fact, between the commodity and gold. . . ."

If the left side were really not affected by the devaluation, then the change in the denominator on the right would enforce a commensurate change of the numerator. There is, however, a seemingly small but paramount difference between the equation and Laughlin's exposition; the latter omits the word *marginal* before *utility*—for good reasons, because *marginal* reminds us of the significance of the quantity of the good concerned at people's disposal. If nothing is changed but the gold content of the currency, then the income flow in terms of currency units is not affected, and, thus, the quantity of gold at people's disposal per time unit does differ from what it was before. In the equation above, the left side is changed (namely, the *marginal utility of gold*); and the equation, having now two unknowns (*marginal utility of gold* and *dollar price of the commodity*) does not yield a solution without the help of additional material. The banking principle merges into the quantity approach.

Let us turn now to the quantitative analysis of the American devaluation of 1933. The discussion of its immediate effects on dollar prices has been marred by the exclusive use of indexes of wholesale prices which do not differentiate between staple goods on the one hand and goods sold under conditions of limited competition on the other hand, despite the fact that this distinction is of paramount importance in the theory of international trade. For most staple goods the price equalization between the various international markets is perfect, except for the differential from transport costs, duties, etc. As long as that is the case, devaluation must create for them at once a discrepancy between their dollar price converted at the previous exchange rate and the world market price in terms of gold, and this discrepancy must be in proportion to the degree of dollar depreciation. In the particular American situation, some typical staple goods (like rye and oats) have not conformed to the pattern of international price equalization but have displayed various degrees of price rise above the world market level, because on the one hand not enough has been produced to permit price equalization by exports, and on the other hand import duties have prevented price equalization by imports. For 1933, we must add to this list¹⁰ goods like wheat, the export of which dropped heavily under the influence of domestic policy. But for the bulk of staple goods, prices in terms of gold remained indeed the same in the American market as in the world market. Still, American prices might not have increased under the impact of the dollar depreciation but world prices might have declined instead. If, for the goods in question, the experience of 1933 points in the first direction—namely, rise of dollar prices and not fall of world market prices—we must be careful not to generalize this result. Theoretically, the problem is very complicated, as Mr. Harris' analysis in

¹⁰ Inclusion of these goods in the index of raw material prices (Bureau of Labor) is responsible for the decline of the index, expressed in terms of gold, during 1933.

his book, *Exchange Depreciation*, shows. We cannot enter here into a detailed theoretical discussion. The British experience in the fall of 1931 may teach us a rule of thumb: staple goods for which the importing country represents the main if not the only world market, naturally depend, as to their price, on the demand in this country; i.e., prices in the importing country will not be affected substantially by a currency depreciation there and prices in terms of gold will correspondingly fall (as in case of beef, pork, bacon, and butter in 1931). In contrast to this, British prices of the other staple goods rose at once and were forced down only after time lag by general world deflation. The American experience of 1933 could thus be explained, first, by an import position different from the British one; secondly, by the fact that the United States as exporter of staple goods was prevented in 1933 from spoiling the foreign market through rapidly increasing exports by several factors (e.g., by the speculative expansion of entrepreneurial demand in May, 1933; then by the somewhat slower expansion of consumers demand through the federal budget deficit in May and again in the fall of 1933); and, thirdly, by the federal output restriction in various fields.

Prices of other than staple goods could not follow the pace of depreciation with equal celerity. They had to rely, for a rise, on the expansion of domestic demand alone (on which gold was not without influence) and could use only very slowly the valve of the world market, which secured a speedy price rise in staple goods.

The question naturally arises: was the rise in prices of nonstaple goods fast enough to prevent a considerable American exports surplus (which was theoretically to be expected) from materializing? In other words, did the devaluation exercise a long-run deflationary pressure on the price level in gold standard countries? One may argue that these gold standard countries formed a smaller and smaller part of the world market and could not be considered as representative; but only in this part had the American devaluation a chance to exercise any deflationary pressure on prices, which in the other countries was excluded by the very nature of their monetary policy. In the nongold-standard countries (and such countries as had just gone over to a new gold parity), any decline in a price-index that is converted in terms of gold might simply express the failure of domestic prices to rise in proportion to currency depreciation and would not indicate a deflationary pressure proper.

As to the gold standard countries, it seems we have to answer the above question in the affirmative. First, wholesale prices did decline in 1934 and 1935 in France, Netherlands, Belgium, Switzerland, and Czechoslovakia. Secondly, American prices of nonstaple goods rose relatively slowly. As late as September, 1937, prices of manufactured goods had increased by only 35 per cent above the level of the first quarter of 1933 (index of

Bureau of Labor), while raw material prices were up by 70 per cent, the full measure of devaluation. With all the reservations necessary in such a rather superficial analysis, we may conclude that it was this price development which caused, in 1934, the sharp increase in the surplus of the American balance of trade and of the balance of payments on income account, raising at the same time gold imports. In 1935 the surplus in question declined to the level of 1933, and in 1936 a deficit arose. It seems, as a distant effect of the American devaluation, world market prices were subjected in 1934, and possibly in 1935, to a deflationary pressure.

But does not the development of the foreign trade in the gold standard countries militate against this conclusion? Indeed, neither France nor the Netherlands nor Belgium nor Czechoslovakia¹¹ showed an increasing deficit of the balance of payments on income account during 1934, and France and Czechoslovakia even imported gold! In 1935, France's gold loss was caused exclusively by the flight of capital. The income account of the French balance of payments took a turn for the worse only in 1936, when the surplus in the American balance had vanished and French prices commenced rising!

In truth, however, the evidence is not contradictory. In 1934 and 1935 the gold standard countries were indeed able to maintain to some extent their exports despite heavier American competition, but only by taking losses! And they prevented a rising deficit in the balance of trade by curtailing imports and reducing employment.

It will scarcely ever be possible to decide whether under a different political and social setup the deflationary pressure would have been absorbed in time. Was the deflationary pressure emanating from the United States still considerable in 1935, when the surplus on income account declined heavily? Or was it rather the flight of French capital in 1935 which prolonged this pressure? Would France have been forced off the gold standard if the French wage level had not suddenly been raised by 13 per cent in 1936?

During the period subsequent to the dissolution of the gold bloc, effects of the American devaluation are scarcely noticeable. In the analysis of the present situation it can be disregarded.

III

In 1936 the last vestiges of the gold standard as it had existed for many generations had vanished. However small or large the gold reserves in a country might be, since gold was now denied any influence on the volume of fiduciary money, and since no other precious metal took its place under similar forms, the mechanism of international trade, of international finance, and the determinants of the price level were fundamentally altered.

¹¹ Balance of payments figures are not available for Switzerland; for Belgium, figures exist only since 1935.

However, gold has not been discarded as money but continues to be convertible into purchasing power in any country. Moreover, the social and political events which accompanied the abandonment of the gold standard in Europe brought about a redistribution of gold (namely, a concentration in a few countries) of a dimension quite foreign to the preceding decades and thus of a peculiar significance for the price level. And while the current inflow and outflow of gold has not been allowed any longer to serve as basis for multiple expansion or contraction of purchasing power, there remained another multiplicative effect particularly important in an era of slackening investment activity, an effect which originated in the rise of exports made possible by the free acceptance of gold even under an imperfect gold standard.

The role which gold has been destined to play to an increasing extent since the middle of the thirties, thanks to the dominating position of the United States, will become clear if we briefly characterize the monetary standards under which the world has lived during the last four years. There have been three concurrent standards: (1) the managed paper standard, established originally by Russia and Germany, and covering today practically the whole of continental Europe; (2) the quasi-gold standard of the sterling bloc; and (3) the imperfect gold standard of the United States. During the war, the quasi-gold standard has become virtually identical with the managed paper standard.

In none of these currency systems has gold been permitted to influence the volume of fiduciary money; but in each of them, an influx of gold created purchasing power corresponding to its physical volume. While the withdrawal of gold and the destruction of purchasing power was, in principle, excluded in the managed paper countries (and now also in the sterling bloc), it remained possible in the imperfect gold standard.

The monetary policy of the paper bloc consisted largely of makeshift arrangements. The general trend is, nevertheless, unmistakable. Domestic inflation and the need for imports drove out all available gold but a minimum reserve. Commodity prices in these countries show an inflationary tendency to rise above the world market level, a tendency, however, which has been checked by two factors: (1) the control of wage rates and (2) the reabsorption of surplus purchasing power by the state. The foreign exchange rate has only the significance of an accounting unit, and is in no way related to foreign trade or foreign capital movements, imports being controlled by the government and export prices being rendered independent of the domestic price level by governmental subsidies.

The quasi-gold standard was intended to eliminate the influence of short-term capital movements on the domestic volume of purchasing power and the domestic price level (in terms of the domestic currency). The "equilibrium level" of the foreign exchange rates was to be that value at which the current debit items in the balance of payments would be

equal to the current credit items. The actual practice differed, not only introducing anticipatory operations of the Exchange Equalization Account, but particularly by indiscriminately neutralizing gold imports, whether they originated in short-term capital imports, long-term capital imports, or a temporary surplus on current account. Gold was transferred, at intervals, to the domestic currency reserve, but only when made necessary, on legal grounds, by a preceding domestic credit expansion.

In this situation, it is easily seen, the American price level has become the dominant factor in the world market's price level. In contrast to former times, a rise in the American price level would not lead to a lasting reduction in American exports and eventually to an outflow of gold. The American balance was protected by two factors: first, there has been the price margin created in favor of the American producer by the devaluation of 1933; second, and even more important, has been the state of steady monetary expansion into which the rest of the world gradually had slid in the second half of the thirties. Limited as it was primarily by the American price level, monetary expansion in Europe, Asia, and South America would make world prices follow speedily any American price rise. Thus, the margin between exports and imports in the American balance never was narrowed down by a fall in exports, but by an increase in imports generated by rising prosperity.

If these conclusions about the dominating position of the American price level are correct, then it is easy to determine the role played by gold in the new era. For during a considerable part of the period, the American price level was supported by the gold imports. It is true that, particularly until 1937, the bulk of the imports came in on capital account and, so far, supported directly only the security price level. However, even from a capital influx there might result, indirectly, a stimulating influence on commodity output and prices, if Keynes's theory that by a reduction in interest rates the flow of investment is expanded is correct. In any case, the volume of gold imports that enabled the purchase of commodities was large enough to influence the state of demand for commodities. Briefly, the wage level governs the level of the supply function and the state of demand determines how far utilization is driven in a given period. The state of demand, in turn, has been governed by four factors: investment, gross and net, which governs domestic income-payments; consumers' borrowing; silver purchases; and gold purchases. It is true that the purchase of precious metals has been only a small fraction of the total demand for commodities; but the significance of these purchases is not correctly represented by this fraction. There is something like a "foreign trade multiplier," as it has been called in analogy to Keynes's investment multiplier.¹² Nothing mysterious must be sought in this relation, since certainly foreign

¹² Cf. R. F. Harrod, *The Trade Cycle* (Oxford, 1936) III, subs., III.

trade has no secret powers which make it superior to domestic trade. What we are dealing with is the fact that a change in the balance of trade, other things being equal, implies a change in the flow of purchasing power per time unit in the country concerned. In other words, if we sell more abroad and do not devote the proceeds to buying more foreign goods, then, to be sure, we make it more difficult for foreigners to continue buying from us; on the other hand, as long as they are able to continue buying on account of their gold production and gold reserve, we could devote the export proceeds in question to starting a *chain* of domestic buying. Moreover, the support, given by this purchasing wave to the domestic price level, may create favorable price expectations and stimulate home investment. Thus, gold imports increase the national income by more than their value!

This influence of gold on the price level, one could argue, is not a trend influence proper, similar to what we establish for the years 1850-1930; it is a typical short-run effect, comparable to that effect which also in the gold standard era was exercised by temporary gold imports and exports. Theoretically, that would be correct, but for all practical purposes, there is a paramount difference, not only in the order of magnitude, but also arising from the absence of any equilibrating tendencies which had been characteristic for the preceding era. There is no validity any longer in Hume's law of international gold distribution, from which the short-run gold movements could create only temporary deviations. The state of affairs, as we have described it, will indeed characterize the trend in the coming era, provided only the general political conditions of the thirties prevail also in the forties.

Whether political conditions will remain the same and which way institutions will change are beyond the economist's province to foretell—even if economic science is interpreted in the most liberal fashion as "economic biology"! Fortunately it is possible to come to certain conclusions without prophesying in detail the outcome of the present struggle. For, whatever this outcome may be, there remains, on the side of the European powers, a strong interest to continue the monetary policy of the last four years, and to exchange gold for American commodities needed so much for armament or peaceful reconstruction. This is evident in the case of a British survival, because the British Empire still produces more than 50 per cent of the world's current gold output; but it is true, also, in case of England's defeat, because Germany (1) will wish to dispose of the large gold reserve she seems to have acquired control of in France, Netherlands, Belgium, and Switzerland, and (2) is interested in making the best possible use of any gold production she happens to dominate in the course of her conquest.

What is the American attitude likely to be, and what should it be? Public

opinion in the United States is almost exclusively concerned with the question whether this country ever will be in the position to re-exchange goods against gold. Public opinion hardly ever differentiates between gold imports on capital account and gold imports on income account. Even less does it take notice of the important, stimulating effect exercised by gold imports (on income account at least!) on domestic production; and it overrates, on the other hand, the loss which the corresponding commodity exports have created for the American economy, counting their whole value as waste instead of only embodied natural resources. And it does not visualize with clarity the state of affairs under which a country like the United States, almost self-sufficient, would desire to import foreign goods against gold.

Let us look first at the situation during the current war! For the time being the increase in rearmament renders unnecessary the stimulus of gold imports. One might even argue that the superimposition of gold imports on armaments threatens our economy with inflationary overexpansion. However, the real source of this danger is not the gold import, but British purchases, which this country favors on political grounds. To prevent an inflationary boom we shall have to rely, therefore, on administrative control of both domestic armament and British purchases. At the same time we must continue, for the sake of the British, to buy gold, applying, however, a gold price policy of greater flexibility in order to secure the repatriation of American securities now in British possession. The lower our gold price, the more England will be inclined to send over securities first and gold only in the second place. The intention is, of course, not to overhasten the selling out of British held American securities but to transfer the power of decision from the British to the United States Treasury.

Then there is the period immediately after the war! If it is terminated by a British defeat or by a peace of compromise (I fear there is no other alternative left), this country may hesitate to give Germany the opportunity to exchange unlimited amounts of gold against materials. Since the American armament boom still would make the stimulus of gold imports superfluous, we might work out an arrangement to buy, if necessary, gold from sources outside the Axis' control, as we buy now silver from Mexico, but discontinue the gold standard altogether. Clearly, monetary policy is then a part of the great game of politics, and no longer a primarily economic question. Since the measures of administrative control of exports and of governmental buying of indispensable foreign materials already taken, and surely continued, might be sufficient for reaching the political ends without fundamental monetary changes, I am not certain that this radical move of wiping out the last vestiges of the gold standard really will be taken. Emotional reactions are likely to play a great role in the decision. I do not doubt that the policy of buying unlimited quantities of

gold at a fixed or a flexible price would be abandoned in case of a British defeat. Gold will then remain demonetized till a new democratic order is established in the world. But I am not certain in case of a British survival. For then the situation is very similar to what it will look like in the very long run. Together, the British Empire and the United States control the bulk of the already developed resources of food and raw materials, and a considerable part of the undeveloped ones. In a case of an emergency, the whole world outside Continental Europe, Russia, China, and Japan would be accessible to us and to our gold. This part of the world will remain on the monetary standard, decided upon in Washington and London; and it will be some kind of gold standard, as long as we do not abandon it.

APPENDIX: GOLD AND PRICES, 1850-1910

It is for the period 1850-1910 that Cassel¹³ has established a famous conformity between long-run changes in commodity prices and changes in the gold stock. Considerably improved upon by Kitchin¹⁴ and Woytinsky-Lorenz,¹⁵ the Cassel conformity states for the years 1850-1910 that the trend of wholesale prices and the percentual deviations from an exponential trend of the gold stock ("relative gold stock") are in very close agreement; and that not only is the correlation perfect, but also the amplitudes of the two curves (wholesale price trend and relative gold stock) are equal. The curves rise together after 1850, reach a peak at the end of the fifties, decline afterwards, reach a trough in the middle of the nineties, and rise again. Can any conclusion be drawn from this statistical conformity for the relation between gold and prices in general? From the theorist's viewpoint, three peculiarities of Cassel's approach deserve comments: (1) the economy is supposed to grow at a constant rate, permitting us to use an exponential or compound interest trend as "normal" for the gold stock; (2) changes in the wholesale price index are taken as representative for changes in the so-called "general" price level; (3) changes in the gold stock are taken as representative for changes in the money flow. The question naturally arises, were these conditions strictly satisfied in the period concerned or did the errors that really are involved in making such assumptions cancel out?

That the turnover of goods, services, and titles to wealth grows year by year at an even rate (of approximately 3 per cent) can scarcely be accepted. But that is not Cassel's assumption. The 3 per cent rate refers not to the actual growth from year to year but to the trend of growth. It

¹³ G. Cassel, *Theory of Social Economy*, Ch. XI, p. 54; *idem*, in League of Nations, *Rapport Provisoire de la Delegation de l'or du Comité financier*, 1930, Annexe X.

¹⁴ Kitchin, League of Nations, *ibid.*, Annexe XI.

¹⁵ Wl. Woytinsky, "Das Raetsel der langen Wellen," *Schmollers Jahrbuch* (55 Jahrgang, Viertes Heft, 1931).

can now be checked by Carl Snyder's independent statistical investigations into the trend of trade and production (physical volume).

Since wholesale price fluctuations show a much larger amplitude than retail prices, and since retail prices fluctuate more than wage rates (which, too, possessed a decidedly upward trend), we should expect that the relative gold stock would have fluctuated less than the trend of wholesale prices. Indeed, Cassel's original curves possessed this peculiarity, and it is only the improved Kitchin-Woytinsky curves that show conformity, also, with respect to the amplitude. We shall be able to restore the original Cassel result without giving away entirely the statistical improvements of his followers.

Taking gold as representative for money implies that during the whole period the "efficiency" of the gold stock had a constant trend value. This is surprising on account of the preponderance of silver in the first half of the period concerned, and of the growing use of check payments. We shall show that, if due account is taken of these factors, the difficulty concerning the right price index also finds an automatic solution.

The statistical difficulties encountered in the attempt to account for the silver circulation seem at the first glance insuperable. For example, the world's circulation of silver coin (excluding India) is given in the report of the director of the United States Mint for the time around 1880¹⁶ at 1,524 million dollars and for the end of 1910¹⁷ at 2,238 million dollars. On the other hand, net coinage figures for the same period amount to more than 2 billion dollars.¹⁸ This discrepancy is attributable to industrial consumption of coin and to coin export to the Far East, provided the circulation figure for 1910 was able to account for this loss, but partly also to errors in the mint director's tabulation.¹⁹ The figure for new silver available for coinage (output minus industrial consumption minus exports to Asia and Egypt), about 23 million kilograms or one-quarter of the output,²⁰ tallies much better with the circulation figures given above, though new difficulties arise if the latter are corrected for silver bullion in banks and treasuries. In any case, building up an annual series of the monetary silver stock would require an enormous amount of work, checking the original sources, and difficulties would be increased by the necessity of accounting for the circulation of governmental paper money. This is clearly beyond the scope of this paper. Nevertheless we can reach important results. Two

¹⁶ Report of 1881, p. 113. Dates for the different countries vary between 1879 and 1881.

¹⁷ Report for 1911, p. 45. I eliminated countries not appearing in the earlier report.

¹⁸ Report for 1911, p. 322, corrected from earlier reports for the years 1873-79, for Asia, African colonies, and other countries not appearing in the circulation figure, and for re-coinage.

¹⁹ For example, the Report for 1882 tabulates for Germany in 1882 silver coinage of \$6.4 million. Inspection of the original report on Germany, *op. cit.*, p. 100, shows that the point is misplaced; coinage amounted only to \$0.64 million.

²⁰ Cf. particularly the Mint Report, 1911, pp. 316 and 317.

statistical facts are beyond doubt: (1) In 1850 silver circulation in Europe and America exceeded gold circulation considerably, with practically the whole European Continent (except Russia) using silver, and only small remnants of gold circulation outside France.²¹ (2) During the period 1850-75 the silver circulation declined. Only in 1910 it reached the level of 1850.

These facts suffice to prove that the increase in the monetary gold stock during the fifties and sixties had much less weight, taken by itself, than assumed by Cassel and his followers. I am quite far from denying, as Tucker did,²² that it had a considerable influence on prices, the more so since both gold and silver output had been particularly small in the preceding decade. But the fluctuations of the relative stock of monetized gold and silver cannot have but shown a much smaller amplitude in the fifties and sixties than Kitchin and Woytinsky obtained for gold alone. And, with a rising proportion of gold in the total stock, the curve of the combined stock can be supposed to approach only slowly that of the relative gold stock; consequently, it would conform less to the trend of wholesale prices but much better to the trend of the general price level.

To obtain an approximate idea of the order of magnitude in this development, I made two computations: (1) I computed the annual rate of increase in the combined stock of gold plus silver for the period 1850-1910. The silver circulation figure for 1910 in the Mint Report can easily be verified:²³ 2,340 million dollars, excluding Asia and Egypt, but including the silver bullion in the treasuries of the United States and Hungary. For 1850, Ad. Soetbeer's estimate (535 million kilograms = 2,240 million dollars) is largely acceptable. The combined money stock increased therefore from 3,360 million dollars to 9,390 millions (using for gold Kitchin's figures), or at an annual rate of only 1.73 per cent. (2) I computed, furthermore, the relative stock of gold and silver for the years 1850-55, during which the changes of the monetary silver stock were negligible. This yields a rise in the relative stock of only 6 per cent till 1855, while Kitchin-Woytinsky's relative gold stock rises by 26 per cent.²⁴

In commenting on these results I want to point out, first, that I do not consider the 1.7 per cent rate per annum as more valid for the growth of the economy than Cassel-Kitchin's 3.1 per cent rate. The main thing is to recognize that for the growth of the economy as a whole, no reliable

²¹ In Germany, e.g., the monetary gold stock cannot have exceeded 15 per cent of the silver circulation. Cf. K. Helfferich, *Die Reform des deutschen Geldwesens* (1898), II, 402, where gold circulation of 1873 is estimated at about 12 per cent of the total.

²² R. S. Tucker, in C. O. Hardy, *Is There Enough Gold?* (1936), App. A.

²³ Kitchin's estimate of the silver circulation of 1913 (*Royal Commission on Indian Currency and Finance* [1926], III, 538, Table VI) is, at 1.9 billion ounces, in accord with the Mint Report. Kitchin does not give estimates for earlier dates. His acknowledgement of 2.064 billion ounces (more than the monetary stock!) "lost or not traceable since 1493" is characteristic of the statistical situation.

²⁴ Woytinsky, *op. cit.*, p. 612, 617 f.

conclusion can be drawn from the normal increase of a part of the monetary stock, unless we make sure about the representativeness of this part for the flow of purchasing power. Mr. Snyder's research work makes probable not only that the trend of physical turnover was of approximately compound interest nature in the period concerned but that the growth coefficient was close to 3 per cent.²⁵ The difference between the rate of growth for the economy and for the metallic stock indicates a rise in the efficiency of the latter, attributable to the relative expansion of credit money. This conclusion is corroborated by all that we know about the establishment of banks in Central Europe and the United States. Moreover, while compared with the trend of the general price level, the amplitude of the relative gold stock in the fifties certainly is too large; that of the relative stock of gold plus silver certainly is too small.²⁶ For the same reason (relative credit expansion!), the curve of the relative gold stock exaggerates the decline in the relative money in the subsequent decades, creating a false impression about the decline of the general price level, and underrates the monetary expansion since the end of the nineties.²⁷ The trend values of wholesale prices in 1850, 1885, and 1910 were on the same level, but, as Snyder's material as well as other data show, and general historical reflection confirms, the costs of living were higher in 1910 than in 1850. I know the objections which can be raised against Snyder's general price index and I realize that wage rates rose more in the United States than in Europe in general; but the differences of the trend of wholesale prices from the trend of the general price level are so great (the latter rose by almost 30 per cent from 1885 to 1910)²⁸ that they can be considered as symptomatic.

²⁵ For America, Snyder's trend of trade and production is indicated for 1830-56 by a straight line in the logarithmic field (with a gradient of 6 per cent per annum); for 1850-1930 by a logarithmic-parabolic trend only slightly deviating from the straight line, and yielding for 1850-1910 a rate of increase of 5.4 per cent per annum. American figures, however, are not representative, on account of the extraordinary growth in population. British figures would better fit this purpose, since (1) the British industrial development, 1850-1910, was keeping the middle between United States and Germany on the one hand and the rest of Europe on the other hand, and (2) the rate of growth of population (from 21 million to 41 million; cf. *Handwoerterbuch der staatswissenschaften*, 4 ed. Art. Bevoelkerung, III, 689) was approximately equal to that of Europe plus the United States (from 290 to 540 million, *ibid.*). Snyder's trend of trade and production is again logarithmic-parabolic with a slight deviation from the straight line, yielding for 1850-1910 a rate of increase of 2.5 per cent per annum.

²⁶ Tucker's English retail price series (*op. cit.*, p. 184) shows for 1855 a trend value of only 104 (trend computed as seven-year moving average, centered). Assuming that rents and wage rates did not show a stronger rise than retail prices, we should obtain, on Snyder's lines, a trend value for the general price level in 1855 of 8 to 9 per cent above the level of 1850. Actually it must have been higher, since British prices are not representative of world prices in a period in which custom duties were repealed.

²⁷ It must be remembered that during the second half of the period 1850-1910, the relative gold stock became more and more representative for the metallic stock in the whole, and that, therefore, the last conclusions in the text would remain valid, also, if silver could be properly taken account of.

²⁸ Carl Snyder, *Business Cycles and Business Measurements* (1927), p. 286. I used as trend a seven-year moving average, centered.

There is a direct way to check our views about the significance of the expansion of credit money. We may consider the turnover of clearing houses relative to the metallic circulation as a rough index of the efficiency of the latter.²⁹ From 1885 to 1910 the monetary gold stock increased by about 120 per cent (according to Kitchin); namely, from 670 million to 1,446 million pounds; and gold plus silver increased by approximately 65 per cent, while the available clearing house figures (trend computed as above) show an increase for England³⁰ of 135 per cent, for Germany,³¹ 300 per cent, and for the United States,³² 310 per cent. Again the differences are so great that we may take them as symptomatic despite the defects of the clearing house statistics as index of efficiency.

What conclusions can be drawn from the Cassel conformity? I cannot help feeling that the close agreement between the trend of wholesale prices and the relative gold stock according to Kitchin-Woytinsky is largely accidental. But I am quite far from denying the significance of gold for the price trend 1850-1910. Of course, one can argue that, theoretically, equal causal significance is attached to all factors appearing explicitly or implicitly in the so-called "basic equation": metallic circulation, credit money, velocity, growth of population and capital, technological progress, discovery of new natural resources. None should be singled out as *the* cause. But it is possible to take a different, more fruitful viewpoint. Since, first, in a given epoch in which peace is interrupted only by short and localized wars, the turnover of goods and titles possesses a rather smooth and even trend, and since, secondly, velocity of circulation seems to be rather constant over long periods (except for the tendency in rich countries to accumulate wealth in liquid form), deviations of the money stock from a correspondingly defined normal must be significant for the price trend. Taken by itself, neither silver nor the expansion of credit money would have created the long wave of prices visible from 1850 to 1910; here the vagaries of gold production and the demonetization of silver are alone responsible.

²⁹ I prefer this index to the ratio of gold to total circulation including deposits, because of possible variations in the velocity of circulation and in the ratio of time deposits to check deposits.

³⁰ Cf. F. Schmidt, "Bargeldloser Zahlungsverkehr," *Handwoerterbuch der Staatswissenschaften*, 4 ed., II, 360; and publications of the National Monetary Commission, VIII, 294.

³¹ Schmidt l. c. p. 359; trend value for 1885 estimated.

³² Debits outside New York City. Cf. Snyder, *Business Cycles*, p. 277.

THE PRICE LEVEL AND THE GOLD PROBLEM: RETROSPECT AND PROSPECT

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The world gold situation at the present time is one of extraordinary interest. On the one hand, gold is of less consequence, whether for industrial purposes, for Oriental hoarding, or for Occidental monetary use, than it has been within the memory of living man. In spite of this fact its price in terms of human effort and of the goods and services which make up the standard of living is higher than it has been in a generation, and the input of labor and capital into the gold-mining industry and the output of the precious metal, are higher than ever before and are still increasing. The reasons for this anomalous situation, its economic consequences, and the probable future of gold form the subject of the present paper.

The period from 1924 to 1928 witnessed a very rapid restoration of the gold standard throughout the Western world. At this time the memory of the distress and disaster of inflation was fresh in everyone's mind, and the restoration of the gold standard embodied an almost universal desire for the restoration of stability—stability of international monetary relations, stability of prices, and stability of social relationships generally. A few academic students, chiefly in England, urged that it would be better for countries to retain the greater freedom of national action which is permitted by the paper standard and to make stability of the purchasing power of money rather than the stability of its value as measured in gold and foreign exchanges the primary consideration. But such suggestions at that time were little more than academic theorizings. Under the leadership of Great Britain and of the League of Nations, the gold standard was re-established in thirty countries, beginning with Germany, Holland, and England in 1924-25, and ending with Italy in 1928, and Albania in 1930.

The new gold standard of the twenties was not identical with the gold standard which was destroyed by the World War, but the differences in general were technical and did not greatly impair the capacity of the gold standard to perform its primary functions. Gold was generally withdrawn from circulation, but so long as governments recognized their responsibility to redeem their currencies in gold or its value equivalent in foreign exchange the disappearance of gold coin was of little immediate practical consequence. More important was the extensive adoption of the principle of the gold exchange standard under which the legal requirements for central bank reserves may be met in whole or in part by the holding of deposits or bills payable in currencies of the gold standard countries.

The gold exchange standard applies internationally the same principle

which was applied in our domestic banking system before 1913 in the depositing of reserves by country banks with bankers in reserve cities. The system, on either the national or the international level, has three principal consequences: first, it allows a larger credit structure to be pyramided on a given gold base, without lowering the nominal reserve ratios; second, it permits banks in the less developed financial centers to derive some income from the lending of their reserves to banks in financial centers; and, third, in time of financial strain it accentuates the difficulties of readjustment by setting up a drain of reserves out of the depository centers into the outlying centers in advance of, and in excess of, the withdrawals made by the public at large from the banks. In the case of the gold exchange standard, the first two of these consequences showed themselves in the prosperity era of the twenties, and the third in 1929-31. It is very doubtful whether there was any real economic gain in the economy of gold which was effected by the system of redepositing reserves, either domestically or internationally, but during the twenties there was a strong widespread belief in the inadequacy of the gold supply, which made this an important consideration. In general, however, there was no important difference in the day-to-day working of the gold exchange standard during the twenties from the way in which a gold standard without redeposited reserves would have operated. The difference became conspicuous when the ability of central banks and treasuries to repay the deposited reserves was put to the test in the early thirties, just as the domestic system was tested in 1907, and with the same results.

A third difference between the prewar and postwar gold standards was the development of extensive co-operation between central banks of different countries, culminating in the establishment of a central bankers' country club, the Bank for International Settlements. In principle the general acceptance of co-operation between central banks as desirable and necessary, involved a compromise with the objectives of having the gold standard, as will be shown below.

In spite of these modifications the two main results of having a gold standard were attained; namely, fixed international exchange ratios, and the use of gold reserve ratios to restrict the freedom of individual nations to permit or induce credit expansion beyond the point of equilibrium with the credit structures of other countries. These two objectives, of course, are intimately related to one another. The value of the currency of a given country can be maintained in a stable ratio to the value of other currencies only if the country is willing to submit to restrictions on the quantity of its own currency which can be permitted to circulate. If we tie the currencies of the world to gold and permit gold to move freely in international trade, any expansion of currency in a given country, if out of step with the expansion of the currency of other countries, will set up a

flow of gold out of the expanding country. This outflow at the same time signalizes the existence of disequilibrium and tends to correct that disequilibrium by forcing contraction of credit in the one country and stimulating expansion in the others. As Keynes has said, the existence of the gold standard does not insure sobriety, but it does insure the maintenance in any one country of the same degree of intoxication or hang-over as is prevalent throughout the rest of the world. To perform this function most effectively, it is necessary that the amount of currency, including, of course, bank deposits, in any country shall be tied to the gold reserves. The technique of tying under the prewar gold standard was the maintenance of a legal or customary reserve ratio. The legal restrictions served to establish a maximum for the amount of credit that could be pyramided on a gold base, while the self-interest of the banking community tended to make that maximum the effective minimum.

During the era of the postwar gold standard the connection between the gold reserve and the credit structure was looser than it was in the prewar period, though it was close enough to make the system work. The connection was looser chiefly because of the greater amount of discretion exercised by central banking authorities in the postwar era in varying the relationship between the basic gold reserve and the funds which they, the central banks, placed at the disposal of the commercial banks and the general public. For example, the practice of the Federal reserve system in maintaining huge excess reserves from 1922 on, meant that at any given time its credit policy was discretionary and not controlled by the gold situation. The credit structure in the United States has in fact been much smaller since 1921 than what the reserve situation would permit. On the other hand, in other countries the effectiveness of losses of gold and gold exchange in checking the expansionary possibilities of the credit system was considerably less in the postwar than in the prewar period. In short, central banks deemed it to be their function to prevent international gold movements from exercising their normal effect on the credit structures of the countries which were losing gold. This was notably true in the case of Great Britain.

To the extent that central banks were successful in thus dissociating the control of their domestic currencies from the influence of gains and losses of gold, the gold standard was replaced by a managed currency. New tests and standards, such as the employment situation and the price level, were substituted for the simple test of the gold movement. These newer tests involved a larger degree of discretion on the part of the currency authorities than was required under the prewar system, which was quasi-automatic in character.

It may be argued that I have overstated the difference between the managed gold standard of the twenties and the automatic gold standard of the

prewar era. It is true that all leading countries except the United States had central banks before the World War, and these banks did interfere through their credit operations with the working of the gold standard. The difference is one of degree, but the difference of degree is extremely important. The gold standard of prewar days was not very different from what it would have been if there had been no central banks at all, as was the case in the United States and Canada, whereas the postwar gold standard from the beginning was hedged about with qualifications designed to make it possible for central banks to obstruct the functioning of the gold standard.

It was obviously impossible, however, for a single central bank to pursue a wholly independent policy and at the same time comply with the elementary requirements of the gold standard that the foreign exchange value of the currency be maintained, and that gold be allowed to move freely in settlement of international balances. These conditions, of course, left it possible for a single central bank to pursue a credit policy more restrictive, or less expansive, than that of the rest of the world—as was done by the Federal reserve system. But they did not make it possible for them to pursue a policy markedly more *liberal* than that of the rest of the world and still maintain the forms of the gold standard. Hence the popularity of the new doctrine of the co-operation of central banks.

The co-operation of central banks was a loose and rather ineffective system for the purpose of enabling individual countries to stave off the necessity of restricting the expansive powers of their banking systems to the limits prescribed by the orthodox gold standard. It is interesting to note that in every case where co-operation was practiced successfully, or where central banks were seriously criticized for failure to co-operate, the co-operation in question was designed to facilitate credit expansion, or to maintain exchange parity without credit contraction.

In part the pressure for co-operation, or for other practices designed to evade the restrictive effects of being on the gold standard, was due to apprehensions concerning the future adequacy of the gold supply. In part it was due to the growth of the idea that the stabilization of prices and of employment rather than the protection of a gold reserve, is the primary objective of central bank policy. Still more, however, it was an expression of the strong nationalism which characterized the era after the World War, as it has after most great wars. It was fundamentally because the restraints which the gold standard imposed on national action were international in character that after its restoration it failed to recover its popularity, and was subjected during its short life to a great and increasing amount of manipulation by central banks, with a view to maintaining what was in effect a managed currency under the forms of the gold standard.

In addition to the factors mentioned above—the intensity of nationalism

and the increased interest in business stabilization as against currency stabilization—reference may be made to certain technical factors which made it more difficult for the gold standard to function efficiently than was the case in prewar days. One of these was the greater rigidity of wage rates, resulting from the growth of collective bargaining, the increased political power of labor, and the greater reluctance of the public at large to insist on policies which would involve reduction of the incomes of large numbers of people.

Another factor which impeded the functioning of the gold standard, and stands in the way of its restoration, is the much greater volume of short-term liquid indebtedness readily transferable from one financial center to another. The self-corrective mechanism of the gold standard is well adapted to deal with variations in the international flow of funds which result from changes in the merchandise balance of payments, whether these arise from shifts in the relative productive efficiency of different countries, from wage policies, or from catastrophes like crop failures or the disappearance of markets. It is not adapted, however, to deal with such a mass phenomena as the "flight of capital" from one currency to another. This is true because of the practice of pyramiding large superstructures of credit on a relatively small gold base. A shift in the balance of international obligations which requires the movement of say one million dollars in gold would require, if there were no unutilized reserves, a contraction of 10 or 15 million dollars in the country's currency supply, and might increase that of another by a corresponding amount. For small changes, this sensitiveness may be advantageous, since it sets up corrective forces of much greater strength than would the loss of a similar amount of funds out of a currency composed merely of gold coin and gold certificates, or bank deposits with 100 per cent reserves. But gold movements like those set up by the fears concerning the French franc in 1935 or the British pound in 1931 and 1939 cannot be checked by the financial pressure which they set up in the country that is losing gold, nor do they lead quickly to sufficient changes in the currencies of the countries receiving the gold for the automatic check to be effective.

The possibility of mass movements of this sort would be present, of course, even in the absence of the great mass of international indebtedness, since it would always be possible under the gold standard for a country's own citizens to deplete its reserves by buying foreign currencies or exporting gold. Indeed, the huge floating balances to a large extent originated in operations of this sort, but the existence of these balances, continuing over long periods of years, has created a new factor of instability which has greatly accentuated, ever since the middle twenties, the risks of the gold standard. No country is willing to suffer the amount of contraction of currency that would theoretically follow from the outflow of such a mass of funds as was free to move out of London, Amsterdam, New

York, or Paris. But it is important to note that it is not the gold standard itself but the system of pyramiding credit currency on a gold base that makes adequate contraction intolerable.

It is unnecessary to review the immediate conditions which led to the breakdown of the gold standard, or do more than mention the outstanding features of the earlier part of the depression era. The period 1930-35 was marked by successive competitive devaluations of currencies, accompanied by liberal policies of credit expansion, with a dwindling number of countries that were stubbornly clinging to the gold standard and 1929 parities. It was also characterized by a continuation of the ancient prejudice against losing gold, even under conditions where no economic purpose was served by restricting its outflow, and by a further great increase in the intensity of the spirit of nationalism.

In general during these years central banks' responsibility for internal credit conditions passed into the control of treasuries or other politically controlled agencies of government. Central banks survived, but they became administrative agencies of the government in power. This era ended with the re-establishment of a fixed parity gold standard in the United States and the surrender of France and the other members of the gold bloc to the pressure for devaluation. It was succeeded by a period in which exchange equalization funds under one name or another succeeded to the responsibilities of central banks, so far as international monetary relations were concerned.

The outstanding features of the world gold situation since 1934 have been two; namely, the enormous increase in gold production and the concentration of the world's gold in the United States. The world's gold output, which averaged about 20 million ounces per year during the twenties, reached 24 million in 1932, 29 million in 1935, and 39 million in 1939—an increase which has had no parallel since the days of the great gold discoveries. Except in Russia, the increase in production is a direct result of the increases in price which resulted from the devaluation of the currencies of all the important gold-producing countries. The present outlook is for an indefinite continuation of the upward trend of gold production. In the United States and Canada it may prove impossible to maintain the accelerated rate of output for many years because of the exhaustion of ore supplies, but in the case of South Africa the full effect of the increase in the price of gold has not yet been felt, and a very much larger output will be obtained in the future. The investment in South African mines has been greatly increased and a number of new mines have been opened, while the old mines have pursued a deliberate policy of conserving their high-grade ore. This is shown clearly by the drop of the yield per ton of ore milled by the large mines from 6.48 in 1932 to 4.35 in 1938.

The abruptness of the drop from a level which had been maintained

steadily over a period of time indicates clearly that the change reflects policy rather than the exhaustion of the higher-grade ore. What has happened is that the devaluation of the currencies has given gold producers an enormous bonus, since their costs of operation, to say nothing of their investment costs, have not risen in anything like the same proportion. In South Africa the costs per ton of ore milled have hardly risen at all, though of course the costs per ounce of gold recovered have risen on account of the use of leaner ores.

The concentration of gold in the United States since 1934 reflects two principal factors. First, the trade balance has been influenced in our favor by the uncertainties and the actual disruption of productive activity in Europe and by the necessity that belligerents obtain in this country supplies and equipment for carrying on war. Second, and more important, there has been a flight of capital to this country in quest of safety. In 1934-36 the controlling factor was the safety of currencies, while in more recent years it has been the physical safety of capital in areas exposed to the shock of war. During the summer of 1940, imports were still further increased by shipment from Canada of gold which presumably originated in the French, Belgian, and Dutch central bank reserves. In May and June alone we imported a billion dollars' worth of gold from Canada, the bulk of which can scarcely have come from any other source than the French reserves.

In 1937 and the early months of 1938 the U. S. Treasury pursued a policy of sterilizing the incoming gold so as to prevent it from having any influence either on the volume of commercial bank deposits or on the reserves of the Federal reserve banks. This was done through the maintenance of an inactive gold account in the Treasury, and by the sale of securities or the transfer of funds from commercial banks to the reserve banks to offset the increase of deposits in commercial banks which resulted from the sale of gold to the Treasury. This policy was abandoned in the spring of 1938 as part of a fresh program of credit stimulation, following the business reaction of the fall of 1937. At present the enormous imports of gold exert their full force on the potential credit supply, although because of the prevalence of excess reserves, they apparently have little effect on money market conditions.

Much has been said in the last two or three years about the cost to the United States of absorbing more than the entire world output of gold, and storing it away as an idle asset. In this connection it may be worth while to analyze the proposition sometimes advanced that the purchase of gold in this way does not cost the government or the public anything. It is true that the purchases of gold under the financial conditions of the last five years have not added to the interest-bearing debt, and no appropriations have been made to finance the purchase of gold. So far as the

The gold certificates constitute a deferred liability. The obligation they represent is the obligation that rests on every government to maintain

government is concerned there is no budget cost. Nor does the transaction involve any cost to the public except to the consumers of gold who have had to pay a higher price for it—if it can be assumed that the labor which has gone into the production of gold would otherwise have been unemployed and the new capital that has gone into the industry would not have been invested productively elsewhere. As soon, however, as the current expansion reaches the stage of normally full employment, the inflated output of gold will necessitate a correspondingly curtailed output of useful goods.

The reason the government has been able to buy this gold without any budget cost is because conditions have been such that a large amount of new money could be injected into circulation and absorbed without producing any undesired inflationary effects. The public is carrying much larger amounts of currency and bank deposits idle than it did a few years ago, and whenever there is an increase in the willingness of the public to absorb money there is opportunity for a government to finance itself without immediate cost by the issuance of credit money. Any activity that is so financed is temporarily costless, in terms of tax burdens. What has happened has been that the government has taken advantage of this opportunity to increase its holdings of gold rather than for some other purpose. However, there are limits to the possibility of such costless financing. To inject new money into the circulation for *any* purpose uses up an exhaustible resource that could have been used for some other purpose. The more gold is bought the less this particular method can be utilized for financing some other activity. I am not suggesting that we have yet reached the limit of the possibilities of this fiat money financing. We have gone far beyond what the limits apparently were a few years ago, and we do not know what the limits are now.

The question may be asked: What would happen if that limit were reached or surpassed? The answer is inflation. Whenever we get out of this era of stagnation, and instead of shrinking income and falling velocity of money we find that the public is spending money faster than it receives it, and is trying to reduce its cash holdings (with consequent increased velocities), and the public problem is to restrain inflation instead of compensating for deflation—then this excess of currency will have to be mopped up. It may be mopped up by taxation or it may be mopped up by selling bonds at high enough rates to induce their purchase without expansion of bank credit. It may not all have to be mopped up, because it may be that the amount of currency required to carry on business with full employment and stable prices is 2 billion dollars larger than it was ten years ago. I do not see any reason to believe that is true, but even if it is true it does not mean that we can buy an indefinite amount of gold without cost.

The gold certificates constitute a deferred liability. The obligation they represent is the obligation that rests on every government to maintain the value of its money. They will become an actual liability whenever the public wakes up to the fact that there has been an enormous increase in the supply of money without any increased need for it except for hoarding purposes, when the defense program creates shortages of key commodities or of labor, when prices rise enough so that people expect them to rise more—in other words, when the depression psychology gives way to that of the boom.

We have learned from the experience of recent years that it is very easy for a government to finance itself during severe depression, because the methods of finance that used to be called unsound do not at such times have the bad effects that used to be associated with them. Deficit financing may actually increase the national income; indeed in the thought of many influential members of this Association, it does so inevitably. The downward pressure on the income stream which is exerted by the propensity of the population to save more than it is willing to invest through private channels makes it possible to inject new purchasing power into the circulation without inflationary consequences. At such times there is no economic reason why, up to a certain budget total, the government should levy any taxes or pay any interest. Issuance of greenbacks would not only be cheaper for the Treasury but would presumably offer slightly less incentive to "saving above investment" than would the issuance of interest-bearing obligations. Taxation and the payment of interest on government borrowings, sufficient to induce savings, are both deflationary, at least in the sense that they replace financial methods that are inflationary. Under deflation conditions any government investment financed by fiat money methods, whether for the purchase of gold or for any other purpose, is, in the short run, costless, except in terms of opportunity cost. But there are many avenues of governmental investment which will contribute more to welfare than does the hoarding of gold.

If we accept the view of those who argue that our economy has reached a stage of maturity in which we may expect an indefinitely continuing deficiency of outlets for saving, there is no reason except the influence of tradition why government should not finance itself by fiat money forever, provided the gross expenditure is no greater than the deficit in private spending. But if, as in the past, it turns out that the deflationary pressures are a passing phase of our economy, the next turn of the cycle will create the opposite difficulty. When the public begins to try to draw down its accumulated cash balances, the government will face the choice of permitting the value of its money to be depleted—that is, inflation—or levying taxes or paying high interest rates for borrowings in sufficient amounts not only to cover current expenses but to mop up the purchasing power which

has been created but not used during the course of the battle against deflation. That is the time when the gold must be paid for. And it is most likely to happen at a time when a balance cannot be restored by cutting government expenditures, because of the needs of the defense campaign.

It is widely believed that the influx of gold into this country is due to the fact that the government pays a high price for it. I believe the importance of this point is greatly exaggerated. If true at all it is obviously not the absolute price but the price compared with that of other nations that is significant. If the United States, Great Britain, South Africa, and Canada should all lower the price of gold by 50 per cent, I do not see why the drift of gold to this country would be any less, except to the extent that the production of new gold would be discouraged. Some gold might move to South America and it is conceivable that so drastic a reduction might reverse the current of gold flow out of India and induce the population of that country to resume the practice of accumulating gold as a means of private saving. With reference to the rest of the world, the forces which have made for the transfer of gold to this country would still be operative. Whether the rate of inflow would be less would depend entirely on the question whether at the lower price the shipment of some other asset would be a better way to transfer private capital into this country from the few countries from which it can still be exported, and to finance British purchases of war necessities. If the United States reduced the price independently, I think the British price would follow, for we can hardly conceive of London's undertaking to overbid us for the output of South Africa and Canada.

The principal effect of the reduction would be to impair the purchasing power of Great Britain in this country. In the short run, more gold might be shipped, but the stocks available for shipment would be exhausted that much sooner. The real question at issue concerns the willingness of the United States to subsidize the defense of the British Empire, and perhaps of Russia and Japan, by accepting what is substantially a worthless asset. The subsidy is effectively disguised, but it is a subsidy none the less.

It is dangerous to generalize as to the long-run future of gold and the gold standard, in view of the great uncertainties as to the whole political and economic structure under which the world may be expected to operate in the next few decades. The following comments, however, are, I think, justified.

First, gold has lost, probably forever, its important monetary functions. The inflow and outflow of gold no longer control the volume of money that is made available to the people of any important country in the world, and are not the chief mechanism by which exchange parities are maintained. Gold is still used to settle international balances chiefly for

two reasons: first, that it is the only commodity except silver which embodies high value in small bulk, is available in large quantities for ready purchase for export, and is admitted everywhere without tariff duties. In the case of transfers to the United States there is the added advantage of shipping gold as compared with any other asset except silver, that the government stands ready to buy it in unlimited quantities. The fact that the government is able to buy it without apparent cash is not due to the monetary qualities of gold, but to the currency stagnation which makes it possible to create new money in exchange for the gold without any undesirable inflationary consequences. Any other asset could be bought in the same way. But this situation may change almost over night.

Second, the prestige of the gold standard has been destroyed. Governments are no longer greatly concerned about the maintenance of stability of international exchanges, and to the extent that they do undertake to maintain stable exchanges, stability against gold is no longer regarded as the only respectable way to obtain stability against foreign currencies.

Consequently there is no economic advantage in perpetuating a situation in which the mining of gold beyond the quantity needed for industrial purposes, is profitable. Indeed, a sound allocation of human resources would involve for many decades a complete cessation of gold mining, and a utilization of existing stocks for industrial uses. Instead of this we are mining more gold than ever before, and steadily increasing the output.

Third, in the British Empire, if it survives in its present form, and probably in the United States, the vested interest of gold purchases, aided by the failure of the public to realize that gold is an obsolete form of money, will almost certainly lead to the indefinite continuance of government policies of buying of gold and will thus perpetuate the waste of human resources involved in the operation of the industry. The parallel case of silver is instructive. Although silver has been of no monetary significance to the Western world for more than fifty years, its producers still claim and receive the support of the government market simply because of the ancient tradition that silver is a monetary metal.

In referring to the obsolete character of the gold standard it is not meant to imply that I believe that the abandonment of the gold standard in favor of managed currencies is a step in advance. On the contrary, I believe that there would be great advantages in the restoration of the gold standard in substantially its prewar form. I have no confidence that discretionary monetary authorities will succeed in giving the world a better monetary system than the nineteenth century gold standard. I do not see, however, the slightest probability that this view will prevail.

If when the present war ends there continues to be a considerable number of independent countries carrying on trade with one another through the medium of private transactions and the customary forms of interna-

tional finance, gold will probably retain a subordinate place in the monetary systems, and will be used for the settlement of international balances. The movements of gold will not directly perform the function of restoring equilibrium, but they will continue to indicate the existence of disequilibrium and serve as one of the guides to monetary policy, though not the principal guide. I do not see, however, that gold will in any way be essential for this purpose. Fluctuations in the exchanges would serve just as well as gold movements to call the attention of monetary authorities to the need for a restrictive policy or the opportunity for relaxation.

If the war results in the establishment of a few great totalitarian regimes carrying on the bulk of international trade through direct negotiations of governmental agencies, as Russia has been doing for many years, then the place of gold will be entirely unpredictable. It will depend on the strength of the vested interests of gold producers.

EIGHT QUESTIONS ON GOLD: A REVIEW

By FRITZ MACHLUP

Criticism and polemics are ingredients which can make a discussion interesting. But how can I criticize where I agree? How can I play one speaker against the other if they themselves are in agreement? I have tried hard to find some issues over which I could pick a fight with them, but in vain. There are no major points of disagreement between Neisser, Hardy, and myself. I had almost begun to suspect that monetary theory has reached that dreaded stage of "maturity" (maturity seems to be one of the rare subjects over which economic theorists can still get excited), until it occurred to me that the congruence of ideas was perhaps merely due to accident in the selection of speakers: the program committee has selected two who are equally sensible. (Must I not call them sensible if I agree with them?)

The next best thing which a discussion speaker can do if he has nothing to pounce upon is to reshuffle some of the arguments and formulate them in a more provocative manner. That is what I propose to do. I shall take a few questions about the gold problem which are at present widely discussed, and shall try to answer them bluntly and without scholarly caution. My answers will be based on views uttered by the two main speakers, supplemented as far as necessary by reasoning of my own.

Question I: Was the devaluation of the dollar in 1933-34, that is, the raising of the price of gold by the United States, on balance a wise or an unwise policy?

A wise policy, to economists, is one which considers not only the short-run effects but also those which are more indirect and less immediate. There were probably several short-run advantages derived from the devaluation; the short-run price increase of some export articles, cotton in particular, may be admitted as such an advantage; psychological effects on business expectations were perhaps of importance at the time. But how about the more lasting consequences?

The devaluation might have been a proper measure in view of a serious gold scarcity. There was no such scarcity, says Hardy. And "the gold scarcity never was a decisive factor during the postwar era," says Neisser.

The devaluation may have prevented an embarrassing outflow of gold from the United States. But the domestic credit situation was not controlled by the gold situation, says Hardy. And he speaks, very much to the point, "of the ancient prejudice against losing gold, even under conditions where no economic purpose was served by restricting its outflow."

The devaluation was supposed to raise quickly the level of domestic commodity prices, something which was considered desirable at the time. This supposed effect was said to rest on a "statistically proven" relationship between gold and the price level. Neisser has shown that this notion is absolutely fallacious, and I believe I may state that most monetary theorists knew this at the time. To these theorists it was therefore no surprise that prices of nonstaple commodities failed to rise with the price of gold but rose only later and to a much smaller extent when demand was increased gradually by other means.

The gold inflow during the first years following the devaluation may be said to have given our banks the reserve increase and thus the investing capacity needed to finance the large government expenditures. Surely, the desired increase in bank reserves could have been brought about just as well by open-market operations of the Federal reserve banks.

What the boost of the gold price really has brought about was this: First, it shattered all attempts at world co-operation discussed at the 1933 World Economic Conference. Second, as Neisser shows, it caused a deflationary pressure upon countries then on the gold standard—a deflationary pressure to which they finally succumbed by abandoning their gold standard. And, third, it added impetus to an enormous increase in gold production, an increase which is absolutely useless, wasteful, and embarrassing. (It must be admitted, however, that the boost in gold production was much more due to British than to American gold price policies. The sterling price of gold—and this is the one which is relevant for the greatest part of world gold production—rose before 1933 by more than 45 per cent. The further increase during 1933 and 1934, which can be ascribed to the effects of the American devaluation, amounted to less than 15 per cent of the increased, or 20 per cent of the original, sterling price.¹)

Hence, with the actual motives recognized as fallacious, with other purposes achievable by better methods, and with indirect effects undesirable, we seem to be justified in stating that the devaluation was a mistake.

Question II: Would a reduction of the gold price at this time be a wise policy?

If it is found that a certain move was a mistake, it is not always possible to repair it by moving back; moving back may often be just another mistake.

The effects of a reduction of the gold price in the United States might depend largely on whether Great Britain and other trading nations would follow suit. Hardy assumes, justifiably I believe, that they would do so. He concludes that "the principal effect of the reduction would be to impair the purchasing power of Great Britain in this country. In the short run, *more* gold might be shipped [to the United States], but the stocks available for shipment would be exhausted that much sooner."

Neisser recommends "applying a gold price policy of greater flexibility in order to secure the repatriation of American securities now in British possession: the lower our gold price the more England will be inclined to send over securities first and gold only in the second place."

I do not believe that it would be in our interest that the British finance their purchases in the United States first by selling out their security holdings and only afterwards by gold shipments. If they first unload all security holdings, an unwelcome and unnecessary pressure on our securities markets may be exerted. If they sell both their gold and their American securities simultaneously and gradually, our gold purchases create new balances for the British and our security purchases transfer existing balances to them. The British in turn transfer all these balances to the American producers in payment for airplanes and other material. By proceeding with both methods of finance at the same time the funds newly created through the gold purchases indirectly help our public to absorb the American securities offered by the British.

¹ For this point I am indebted to Dr. Peter Drucker.

It is proper at this point to mention the proposal of an import duty on gold, suggested by Professors Graham and Whittlesey. Such an import duty would create a two-price system for gold by lowering the price of gold abroad without changing our official buying price. This indirect gold price reduction through an import duty would differ from an outright reduction of our price only in optical, political, and bookkeeping respects. The effect upon foreign nations would be the same as that of an outright reduction of our gold price; for an ounce of gold they would get only \$35 minus the duty.

What the gold price reduction, outright or concealed, would mean in effect is that more gold would be needed to pay for an American airplane. With the demand for airplanes practically inelastic, gold imports would probably increase in physical amount and remain unchanged in dollar terms. And since the British gold stocks would be exhausted sooner, the problem of credits to Great Britain would arise sooner.

Hence, a reduction of the price of gold at this time would mean little to us but it would definitely harm the British, whom we seem to have decided to aid. Of course, if we thus find it unwise to reduce the gold price at this time, we must be clear that the situation may change, especially when the war is over.

Question III: Do our large imports of gold constitute a sacrifice of wealth or income?

The huge quantities of gold which we have purchased are a rather useless asset. We have neither an industrial use for them nor a monetary use in domestic circulation nor a monetary use in the sense that we may ever intend to have sufficient import surpluses to use substantial portions of the gold in international payments. If this is correct, has it not been utterly foolish to buy all this gold? Not if the gold has cost us little or nothing and if the purchase has had desirable secondary effects.

And just this is the opinion of Hardy, Neisser, and myself. We must, of course, distinguish between the budgetary or financial cost to the buyer, i.e., the U. S. Treasury, and, on the other hand, the real cost to the American public.

There is no budgetary cost to the government, at least if the purchased gold is not sterilized. And we have not permanently sterilized any gold. Neither tax receipts nor borrowed funds were employed in buying the gold, but only new bank funds created *ad hoc* through the issuance of gold certificates; hence at no cost to the government.

And, as Hardy continues, until now or until very recently there has been no real cost to the American public because what we have given in exchange for the gold has been largely commodities produced with equipment and labor which would have been unemployed otherwise. If the goods which we have exported would otherwise have remained unproduced, one cannot say that the exports constitute a sacrifice to the American public. Neisser concurs with this view, qualifying only concerning the "embodied natural resources," meaning the materials which we have taken from exhaustible resources out of the ground and used in the production of exported commodities. Both Hardy and Neisser emphasize, of course, that such costless gold purchases are confined to periods of unemployment and idle capacity.

But not only have we bought the gold at almost no cost to ourselves but we

have also enjoyed a beneficial indirect effect in the form of a contribution to our national income which has resulted indirectly from our gold purchases, even though the gold as such is of no use to us. If foreign nations use the dollars received for the gold to purchase American products, income is created in the United States. If the respending of this income creates demand for more commodities which would otherwise not be produced, further income is created. As Neisser points out, a chain of additional domestic buying is initiated by the foreign buying, which in turn is financed by our gold buying.

I imagine that Professors Graham and Whittlesey would like to object to this point. They would perhaps admit that the foreign purchases of our products have created income in the United States but they would hold that more relief payments or more public works would have done this equally well or better.

Perhaps, but perhaps not. Would it have been politically wise to raise our government expenditures to still higher scales? Is it not better to have both exports and government spending in more swallowable doses than only government spending in much more terrifying doses? We have financed commodity exports through our gold purchases and deficit spending through our public debt increase. Granted that the export multiplier and the government spending multiplier may theoretically be the same, do rising export business activity and rising government debt figures have the same effects on business confidence and private investment? Should we neglect the fact that businessmen become paralyzed with fear when they think of the debt, whereas they nurse an old affection for gold and cheer each increase in exports? I feel that on the basis of this reasoning even Graham and Whittlesey might be persuaded to accept the thesis that our gold purchases have financed commodity exports of recent years at almost no opportunity cost to ourselves.

The results of gold purchases which financed foreign purchases of American securities may be a different matter because these securities may be resold to us against American products at a time when we no longer have unemployed labor and unused capacity. Indeed, as soon as some bottlenecks are reached, foreign purchases do involve real costs to us. But why should we fool ourselves with an analysis which neglects all political considerations? Are not the British purchases even in serious bottleneck situations of such a nature that we do not mind foregoing new 1942 model automobiles and several other things which may constitute the opportunity cost of our aid to Britain? We are in fact quite glad that the British have still some American securities—at one time acquired with the help of our gold purchases—because we have an easier political problem if we repurchase American securities than if we have to buy British government obligations.

I must guard myself against the charge of inconsistency in my answers to the first question and to this one. How can I consistently state that the raising of the gold price was, on balance, unwise but that the gold imports have had beneficial effects on the American economy? This is not inconsistent. The gold imports of the last four years were not the consequence of our devaluation. Neither the European capital flight nor the European demand for our products were after 1936 a function of the price of gold.

Summing up, I feel justified in stating that the large gold purchases of the recent years have cost us little or nothing and have made sizable contributions

to our national income. Continued gold purchases and war material exports from now on do involve a larger cost, but on account of extraneous circumstances we seem to be willing to shoulder this cost for the time being.

Question IV: Are the other nations likely to abandon gold as an international means of exchange even if the United States wishes to retain it?

This question can be answered with confidence in the negative. As long as the United States is prepared to take gold at a fixed price, other nations which have access to gold will not be so foolish as to refuse to use gold in international exchange. Both Hardy and Neisser share this opinion.

Popular apprehension on this point, particularly in case of a German victory, is perhaps the result of propaganda which is attempting to create unrest and fear. Mere common sense should make us realize that any country which controls gold stocks and gold mines would be only too glad to maintain the exchange value of these assets. If anyone pictures a victorious Germany as possessing not only the remaining gold stocks of Europe but also as controlling the gold production of one or more of the British dominions, he should extend his imagination to the logical consequence of all this; namely, that the Germans will not do anything to prejudice the international acceptance of so reliable an export product. In the case of a complete German victory the question should run exactly the other way around; that is, whether the United States would be willing to continue accepting gold from a victorious Germany. Neisser does "not doubt" that in such a case we would stop.

In the case of a British victory or in the case of a survival of a sufficient number of free, trading nations gold is likely to retain its status, in the opinions of both Neisser and Hardy. If one or more nations without access to gold prefer to do foreign trade on a barter basis, this cannot greatly affect the status of gold in the rest of the world. People are apt to confuse two different aspects of the much propagandized barter methods of foreign trade. One is that trade is controlled through government agencies rather than private business firms. The other refers to the settlement of balances. Under the barter system temporary balances remain unpaid, shown in blocked accounts in the country which has imported more, forcing the country with the export surplus either to wait patiently or to buy things which it otherwise would not care to buy or to cut down its exports. These are certainly not advantages which should tempt more countries to adopt the barter system. The authoritarian export monopoly may possibly secure advantages, but the absence of gold can hardly ever benefit a country, least of all a country which is more interested in exports than in imports and would be able to export only if it were willing to accept blocked accounts in exchange for its products. Even if some countries adopt barter agreements in foreign trade, this need not really affect the status of gold among the other nations.

The United States need not be much concerned that other nations after the war may repudiate gold as long as the United States itself does not repudiate it.

Question V: Can gold lose its value?

Yes, if the United States decides against gold; no, if the United States continues to support it. If I may borrow a phrase from Professor Brown, I may say

that gold is perfectly safe as long as we redeem it in paper dollars or bank deposit dollars.

There are at least three meanings in which we may be concerned with the "value of gold." Gold may lose in value in terms of dollars, in terms of foreign currencies, or in terms of commodities.

The value of gold in terms of dollars depends on our government policy and nothing else; as long as our Treasury is willing to buy and sell it at \$35 an ounce, gold will be worth \$35 an ounce. There is nothing under the sun which should make it impossible for our government to uphold that price, although there may be many things which may make it undesirable to do so. When we feel that it is no longer desirable to maintain the price of gold we may of course lower it. Gold can lose in value in terms of dollars only through an action of our own; not through actions of foreign nations.

The value of gold in terms of foreign currencies depends on other nations. But what does it mean that gold loses in value in terms of foreign currencies? It means—if the dollar price of gold is maintained—that these foreign currencies become more and more valuable in terms of dollars; that is to say, that the foreign exchange rates of these countries rise steadily with all the awkward deflationary pressure which this would have on their markets. We can be fairly sure that countries would not normally like to embark on such a policy. Hence, unless gold production becomes as exuberant as silver production once did, it is not likely that gold will lose value in terms of foreign currencies while we maintain its dollar value. As long as other nations feel sure that the redemption of gold into bank deposit dollars remains possible, they will be glad to accept gold, too.

The value of gold in terms of commodities is, as long as the dollar price of gold is fixed, nothing but a matter of commodity prices. With inflationary armament and war expenditures all over the world, commodity prices are likely to rise in the next years, and in this sense the value of gold is likely to decrease. Increased gold production is only one of several and not the most powerful factor tending in this direction. Should new gold mines be discovered or new production methods be developed the inflation through gold purchases might become very serious. Even at the present rate of gold production we may find after the war that the inflationary pressure is more than we like and we may find it desirable to lower the dollar price of gold. But we need not fear anything like a run-away inflation through a gold deluge. The commodity value of gold is much more a function of government spending and credit expansion than a function of the gold supply.

I suspect it is not the rise in commodity prices of which people are afraid when they ask the question whether or not gold can lose its value. What people have in mind is the \$35 which an ounce of gold is now worth, or perhaps the foreign money value. In these respects, however, the United States has the decisive say and we need not worry much about outside forces.

Question VI: Would it be a good idea to readmit gold into domestic circulation?

Such a step would do no harm but it would do no good either. Gold coins in actual circulation could never mean much in our monetary system. Even if people did prefer gold coins to \$10 and \$20 bills—which is more than doubtful—not much of our 21 billion dollars of gold would be absorbed by circulation, because

the circulation of bills in these denominations amounts to no more than 3 billion dollars. In actual fact only a very much smaller sum would be absorbed by active circulation.

Gold hoarding might possibly absorb more. But would gold for purposes of private hoarding be very popular in times when the possibility of a reduction of the gold is constantly under discussion? Of course, if Congress decides on new gold coinage the population may take it as a determination to refrain from further changes in the gold content of the dollar. The present low interest rates on savings deposits and government bonds are factors favorable to the development of new gold hoarding habits of our population.

But what is the good of such hoarding? One advantage might be that private gold hoarding would reduce the present excess reserves of our banks, something which ought to be done but which can be done by other methods. Otherwise there is little that one may claim for the plan. The prospects of possible fluctuations in the popularity of private gold hoarding would definitely be an important argument against the proposal. And there is absolutely no advantage in our committing ourselves to a definitive gold price at this moment when everything is in flux and nobody knows how the world will look in a few months.

Question VII: Can the United States use some of its gold to reduce the government debt?

This is only a naïve layman's question but it pops up so frequently in discussion that it deserves an answer. When I deal with it from this forum I speak, as it were, for the galleries.

First of all, the gold in the possession of the Treasury is not at its free disposal; gold certificates have been issued against the gold; before the gold is used otherwise, the gold certificates would have to be replaced by something else: by a new government debt perhaps? Increase the debt in order to decrease it?

Secondly, the present holders of the government debt—individual savers, corporations, insurance companies, and banks—are not interested in gold and would not think for a moment of holding gold coins instead of interest-bearing bonds. The gold coins would be deposited and would be back at the Federal reserve banks within twenty-four hours. The member banks' excess reserves would have immensely grown within that day. And all the newly created money funds, both those of the bank customers and those of the banks themselves, would then desperately try to find investment outlets. The savers, insurance companies, etc., could hardly be expected to hold on to their non-interest-earning bank deposits, nor could the banks afford to carry nothing but idle reserve balances in place of interest-bearing government bonds. The inflationary effect of all this would not in the least be different from that of a debt redemption through greenback issues.

Let us follow through the greenback way of paying debts in order to compare it with the "golden" way of paying debts. If the government decided to redeem its bonds with new greenbacks, there is no chance that the paper currency would be kept by the repaid bondholders. Instead it would be deposited in banks, and by the banks with the Federal reserve banks. Excess reserves would jump high and the newly created funds, both of bank customers and banks, would struggle

for outlets. Knowing that the greenbacks would not stay in circulation but be exchanged into bank deposits, the Treasury could easily short-cut the whole procedure by depositing the newly issued greenbacks directly with the Federal reserve banks and redeeming its bonds by check. Now it should be clear that it would make little difference whether the statement of the Federal reserve banks showed new gold coins or new gold certificates or new greenbacks among its assets. In any case excess reserves would be in dizzy height and the masses of new funds in the possession of former bondholders would start a wild, inflationary chase for earning assets. The banks would be drowned in their liquidity and would probably find themselves unable to pay their salaries from the deficient earnings.

Thus the consequences of both methods of repaying government debt—using the gold or using a greenback issue—are the same and, of course, equally dangerous; but one must say that the greenback issue would be much simpler than the round-about transactions with the gold.

Question VIII: If the world retains gold as an international medium of exchange, will our large gold reserve be of advantage to us?

So large a reserve as the United States has can hardly ever be of any service. It can be of disservice if it is allowed to be a psycho-political temptation with regard to inflationary experiments. Otherwise the buried gold does us no harm and no good.

We shall probably never use the gold in exchange for commodity imports unless we change our attitude concerning large import surpluses. The people of the United States have too long been taught that unfavorable trade balances are something really unfavorable. Only in case the United States has to fight a long war or to indulge in a heavy inflation would large imports find a friendly reception. In an extended war we might be willing to buy sufficiently from South America and from India and use some of our gold to pay for the import surplus. In a serious inflation fast rising prices might create and permit an import surplus and in payment for this import surplus, as well as in a flight of capital, we might lose a portion of our gold stock. Apart from these rather improbable possibilities there is little chance that we shall use substantial parts of the gold for payments abroad.

Perhaps the possession of the vast gold stock can prove to be a valuable weapon at a future peace conference; however, we must not forget that the weakened nations after the war may have to use any credits they can get to purchase imports rather than to build up new gold reserves.

Given our attitude toward imports we seem to be justified in regarding as very unlikely that the gold which we now have will ever again leave our country. Even if the greater part of the world retains gold as the international medium of exchange and returns to some form of a gold standard, the gold to be produced in the next few years and the gold now held by other nations will probably be sufficient to take care of all international payments of the postwar period.

If this is correct then it would not be incorrect to speak most irreverently of our large monetary gold stock. One might, for example, make the drastic and cruel statement that if some 15 billion dollars of our gold stock suddenly evaporated into thin air the nation would have lost nothing.

COMMENTS ON GOLD AND THE MONETARY SYSTEM

By WILLIAM ADAMS BROWN, JR.

We are in the midst of a difficult and radical readjustment of ideas concerning the place of gold in our monetary system. No one can have any doubt of that, and, indeed, it is imperatively forced upon us by the events of our time. As a result certain very simple but very urgent questions are being asked of the economist by the general public, and these questions require clear and simple answers from our fraternity unless it is to forfeit the confidence of those who still look to it for guidance on economic matters. Economists, however, find it difficult to give clear and simple answers for they must take into account the very numerous repercussions of fundamental changes in the monetary standard upon all the elements in the economy, and for them, as well as for the public, the future is shrouded in terrible and menacing uncertainty. But the public will not assimilate complicated answers to its simple and urgent questions. If forced to alter radically long cherished illusions about the monetary standard it will oversimplify and rationalize the new situation. It will not give up its old illusions without substituting new illusions for them unless it receives clear, convincing and reasonably united guidance from those supposed to be professionally competent in these matters. Even then, as Mr. Hardy has pointed out, deep-rooted popular prejudices, beliefs, and emotions about money are very hard to change. It is therefore of the utmost importance that the public should not gain the impression that among economists there is an endless, technical, and sterile controversy over the question of the standard. The difficulties of formulating and putting into effect the new measures and policies required to meet the new monetary problem now pressing upon us, already formidable enough, will be greatly increased if the economists do not attain such a degree of cohesion in their views that their conclusions can be translated into simple and popular terms.

The questions that are now being asked concern both the present and the future. Concerning the present people say: Why are we buying all this gold? What is it costing us? What are we getting out of it?

To the first question Mr. Hardy replies that we are at present willing to accept a "substantially" worthless asset in order to subsidize the defense of the British Empire, and Professor Neisser also says that "for the sake of the British" we must continue to buy gold. He does not say that this gold is a substantially worthless asset, but he does say that it is a dangerous one. To the second question Mr. Hardy replies that there has been no direct budget cost and no cost to the public *yet*, because conditions have been favorable for the absorption by the public of the new money created by the gold imports, but that there is a delayed cost that will become very apparent when the inflationary forces thus introduced into our system begin to take effect. Professor Neisser replies that though gold imports in recent years have had a stimulating effect on our economy, stimulation from this source is no longer needed, and "it may even be argued that the superimposition of gold imports on armaments threatens our economy with inflationary overexpansion." The answer to the third question is included in the answers to the first two. In recent years we have acquired a new active money supply which has taken the place of money withdrawn from circulation,

and which may have stimulated our economy, but this has now ceased to be an advantage and is in fact dangerous. Still, on political grounds we favor Great Britain. We do not wish to interfere with her ability to pay for things she desperately needs and that we can supply. Therefore we continue to buy gold. Professor Neisser, however, suggests that it would be better for us to pursue a "gold policy of greater flexibility in order to secure repatriation of American securities now in British possession"; in other words, pay less for gold, make it harder for Great Britain to pay in gold, and force her to sell more securities.

The questions of the public with regard to the future take two forms: How long is the world going to continue to dig gold out of the ground and bury it in Fort Knox? How can we find a way to put all this gold to work?

Professor Neisser divides his answer to the first of these questions into two parts. In the case of a British defeat he says:

I do not doubt that the policy of buying unlimited quantities of gold at a fixed or flexible price would be abandoned. Gold would then remain demonetized until a new democratic order is established in the world. In the case of British survival, the world outside Continental Europe, Russia, China, and Japan will remain on a type of monetary standard decided upon in Washington and London. This will be some kind of gold standard as long as we do not abandon it.

On the assumption of the survival of the British Empire in its present form, Mr. Hardy returns a disheartening answer. In the future, he says, as evidenced by the history of silver, the United States and British Governments will be induced by the vested interest of the gold mining industry, aided by the failure of the public to realize that gold is an obsolete form of money, to continue to buy gold indefinitely. In the event of the destruction of the British Empire no positive answer can be given.

Neither Mr. Hardy nor Professor Neisser, I am glad to note, says anything about putting our huge gold stock to work.

The layman thus has his answers, though he probably will not appreciate the excellent historical and theoretical analysis that lies behind them. Nor will he fully realize that they conceal behind their apparent simplicity a good many complicated matters directly affecting the present and future welfare of our economy. We are buying gold to help Britain. This has not yet imposed any burden on our national budget but it threatens us with inflation. In case of British survival we shall continue to buy gold either because our ignorance in monetary matters will be exploited by vested interests, or because, for regions outside of totalitarian control some form of gold standard will be decided upon by Washington and London. In case of British defeat gold will probably be demonetized. The economists have not yet thought up any way of putting our gold to work.

These answers will leave the layman with a sense of discomfort, if not of bewilderment, particularly if he is one of those who has read the statement of assurance to the American public recently issued by the Economists' National Committee on Monetary Policy on "Why Germany Cannot Impair or Destroy the Value of Our Gold," in which it is said:

... if Germany should refuse to accept our gold in payment of her goods our currency would still be more valuable because it is secured by gold as an asset than it would be in the absence of such security.

Aside from such questions as why, if we are buying gold to help Britain we also buy it from Japan, I think this feeling of discomfort and bewilderment is due in part to the rather recent and rather sudden realization on the part of the public that something has been radically wrong with the international gold standard ever since the first World War, something about which economists did not give fair warning, and on the interpretation of which they were not yet in full agreement. There has been no consistent thread of historical interpretation in the public discussion of the gold question, and each new radical change in the situation has come as an unexpected, and usually an unpleasant, surprise. The public mind is therefore thoroughly unprepared to deal with the ultimate question of whether or not the gold standard is to survive at all, and is inclined to blame the economist for not having worked out some solution or at least made the situation clear. Many economists who have labored to enlighten the public and each other in this field will feel that this is unjust. Public disillusionment and justice do not as a rule go together; yet there is some justification for the public attitude towards the economists, and I believe that this lies in the failure of the economists to emphasize sufficiently the basic differences between the postwar gold standard and the gold standard of 1914. Even Mr. Hardy, who anticipates the charge that he has overstated the difference between the "managed" gold standard of the twenties and the "automatic" gold standard of the prewar era, seems to me to have underestimated the differences between the two periods. He says in his paper:

The new gold standard of the twenties was not identical with the gold standard which was destroyed by the World War, but the differences were in general technical and did not greatly impair the capacity of the gold standard to perform its primary functions.

These primary functions he describes as, first, to maintain fixed international exchange rates and, second, to restrict the freedom of individual nations to permit or induce credit expansion beyond the point of equilibrium with the credit structure of other nations. To many people this statement will appear incontrovertible, and my objection to it is not so much to what it says (though I should like to know Mr. Hardy's mind more fully on the meaning of "the point of equilibrium" between the credit structures of different nations) but to what it ignores and what it conceals.

Before the World War we bought and sold gold at a fixed price in order to purchase membership in a system of stable exchange rates and to share with other countries the advantages of a confident international movement of long-term capital that spread the industrial revolution throughout the world, to enjoy the benefits of a highly efficient and cheap machinery for financing international trade in goods and securities, and to avoid the dislocations incident to violent departures in the course of our prices from the general trend established elsewhere. These general trends were influenced, in the manner stated with such care and discrimination in Professor Neisser's paper, by the amount of gold available for international distribution chiefly through London. In order to do this we made of our own deliberate choice certain sacrifices of sovereignty over our monetary and economic policy, for we accepted membership in what was in effect a sterling exchange standard system. This system of stable exchange rates was

maintained primarily by a series of adjustments made outside Great Britain by many countries in order to maintain stable rates on London, and therefore on each other. Great Britain exercised great powers over this system and also assumed great responsibilities. She could not adopt a monetary policy that disregarded these responsibilities. Limitations were placed on British sovereignty in currency matters by her position at the center, and limitations were placed on the sovereignty of other countries by their relations to the center. There were economic sanctions that were called into play when necessary to make this system work—chiefly the power of Great Britain to grant or withhold credits—but its main sanction was a general recognition of its advantages. In the mind of almost everybody these appeared so overwhelming that "parity with gold" became synonymous with "sound money."

During the first World War a tremendous effort was made to preserve the legal framework under which in ordinary times parity with gold was achieved, and to preserve the system of exchange rates long considered normal. After that war we faced economic adjustments made necessary by a world-wide redistribution of economic power, a distortion of world currents of trade, a major change in the international ownership of long-term capital, and the settlement of a series of very large political debts. In facing these difficulties we suffered from two great illusions: that normal techniques and so-called "corrective" gold standard adjustments could re-establish international economic relations essentially like those existing before 1914; and that the 1914 system of exchange rates still had some validity. Therefore the nations were unable to conceive of the problem of the gold standard after the war in terms of replacing an international convention that had become obsolete. They could not see the wisdom of changing simultaneously the gold content of their various standard coins to conform roughly to the new conditions. They embarked upon a struggle to return to par, which was abandoned reluctantly and often with a sense of shame by countries for whom the effort was either hopeless from the beginning or too costly to be borne. There was much truth in the bitter postwar words of G. D. H. Cole:

There is a Great God named Par who is worshipped daily in the Treasury and in the magnificent temples the big five are erecting on every street. Par loves unemployment. It is his form of human sacrifice. And on Par's altars the Treasury daily burns incense in the form of currency and credit.

In the early stages of this struggle the United States became the residual buyer of the world's gold. The rest of the world earnestly hoped that this gold would produce inflation in America, and thus enable it to placate Par with a minimum of his favorite sacrifice. But the hoped for American inflation was *delayed*, and here we may, I think, following Mr. Hardy, find an analogy to the present situation. Other countries therefore began to return to gold without benefit of American inflation, but when confidence was restored in international relations by the Dawes Plan and the British return to gold, American gold inflation really took hold, and had a profound effect on the whole course of events from 1925 to 1929. The meaning of *delayed gold inflation* is suggested by the following figures: from June, 1920, to October, 1924, the United States increased its monetary gold stock by 1,800 million dollars and its deposits by 6,100 millions,

while from October, 1924, to June, 1928, it lost 400 millions in gold and increased its deposits by 9,300 millions.¹ The American banking system was actively looking for outlets for an abundant lending power in 1924, and it does not seem to me that a "point of equilibrium" was ever reached during the next five years between the American credit structure and that of other countries.

In my judgment it is a profound mistake to consider the differences between the gold standard re-established at this time and that existing before 1914 to have been chiefly technical. They were, I believe, fundamental in three respects.

1. The world was now faced for the first time—and in this I am in hearty agreement with Professor Neisser—with the problem of managing a true international gold standard. The former nearly world-wide sterling exchange standard system had shrunk into a segment of the whole (defined as the sterling area), and a large and very important dollar area had come into existence. In addition a strange and remarkable series of events gave France, after 1926, a dominant, though temporary, position of power in the whole system. The international gold standard mechanism had to cope with the problem of providing some cohesion and stability in the relations between these distinct groups, and all outlying and debtor countries had to adjust themselves to the stresses and strains developing within the central nucleus of the system.

2. The international movement of long-term capital was now dictated fundamentally by the needs of one creditor country, Great Britain, preoccupied with the necessity of defending a basically weak exchange, of one creditor country, France, utterly disillusioned by defaults on almost all of its prewar, long-term foreign loans; and of one creditor country, the United States, seeking outlets under the impulsion of a delayed gold inflation and the necessities of an export trade overexpanded in relation to its willingness to accept imports. In addition the single sterling short-term international loan fund had been replaced by a combined sterling and dollar loan fund swelled by a great volume of French claims on London and New York, and the short-term international trade financing machinery was divided and competitive.

3. The world's productive capacity was so far from being adjusted to available markets that painful, even revolutionary, changes were necessary before a new international equilibrium could be worked out. An international institution designed to facilitate evolutionary adjustments, and deprived of its former powerful and centralized control, could not enforce such changes, especially when they were being resisted by all the forces of national self-interest.

Consequently in the 1924-29 period, the world's international financial machinery, rudely torn from the matrix of a gradually developing world economy, was used to postpone rather than to facilitate adjustments that were bound to come sooner or later. This was most clearly shown by the gold redistribution policy of 1927. Undertaken at a moment when it was becoming clear that without special help Great Britain could not stay on the gold standard with Bank rate at 4½ per cent and when a breakdown of the Dawes Plan seemed imminent, this policy relieved Great Britain from pressure, facilitated the French return

¹ Cf. my discussion in *The International Gold Standard, Reinterpreted, 1914-1934* (National Bureau of Economic Research, 1940), p. 577.

to gold at a low rate of exchange, promoted securities speculation in America and imprudent American loans to Germany and South America, accelerated the already extreme rationalization process in Germany, financed a continued large export surplus in the American balance of trade, and temporarily improved the barter terms of trade between agriculture and industry throughout the world. Had a major crisis been allowed to develop in 1927, we would not, in my judgment, be meeting here today to consider whether gold is an obsolete form of money, or to make guesses as to what restricted role it may still be made to serve in the future.

From 1929 to 1931 a rearguard action was fought in defense of the newly established gold standard system, during which it was discovered that the foundation of the prewar technique of financing the depression phase of an international trade cycle by short-term credits had been undermined; and after 1931 this developed into a fierce battle to shift the economic burdens involved in a readjustment of the world's productive capacity to available markets both within and between countries. We are all veterans of this battle, and it is still in progress, though now submerged in a world conflict of which it has become only a part. Its weapons were exchange depreciation, total and fractional, exchange control in the many aspects recently described by Professor Ellis, deflation as exemplified by the Bruening policy in Germany, repudiation of debt, domestic and international, private and political, destruction of world markets for commodities, tariff warfare, bilateral and barter trade, and devaluation in gold by some countries while others still made sacrifices to Par. During this battle, capital moved from one country to another, not to promote trade, but in search of refuge, and the powers of the United States to attract gold reached their zenith.

During this period the American public has been asked to make violent shifts in its attitude towards the gold standard. In April, 1932, the President of the United States triumphantly announced that we had successfully defended "the Gibraltar of world stability" by staying on the gold standard, departure from which would have meant disaster to every person in the United States who owned money, and in July, 1933, the President of the United States dramatically announced that orthodox views about the gold standard were simply "old fetishes of so-called international bankers." In total disregard of the inflationary uses to which the gold standard had been put only a few years before, the conviction became widespread that the gold standard was *inherently* deflationary, and that adherence to it involved real costs that were not compensated for by the advantages of a stable system of exchange rates. This conviction was hardly formed before a new type of gold standard was set up which, as far as this country was concerned at least, seemed to be inherently inflationary. We were clearly making a gigantic exchange of valuable assets for gold which seemed to serve no useful purpose and yet, according to the highest authorities, in some way contributed to making the American dollar the "soundest" currency on earth. There seemed to be something rather baffling about the situation, and I think that there has been growing in the public consciousness an uneasy feeling that we have been incurring real costs, of some kind which it is hard to pin down, by buying all this gold, and I do not think that the layman will be readily

convinced by Mr. Hardy and Professor Neisser that the real costs connected with the gold inflow have not actually been paid in recent years, are not yet being paid, but are only potential in the form of latent inflationary dangers. If the public did not think that this gold had cost us something, it would not be so irritated with the economists for not finding some way of putting the gold to work and would not talk so much about the danger of our being left "holding the bag."

There is justification for this attitude, and I should therefore like to consider the balance of advantages and disadvantages to us of having been for so long a magnet for the world's gold. It is at this point that some, though not all, of the important connections between this topic and those of our other meetings are established.

The devaluation of the American dollar in 1934 and the gold purchase policy which preceded it were acts taken on our part to secure certain advantages in the economic warfare to which I have referred. Its general aim was to break the vicious circle of declining prices and in particular to raise farm prices more than other prices. It could not have been successful in this respect unless other countries, notably France, had clung to their faith in parity with gold. By giving arbitragers a golden opportunity to make profits by selling gold to us we suddenly introduced into our balance of payments a debit item which disrupted the existing system of exchange rates which we did not like and turned it into one that we did like. But this had important secondary consequences. It produced, first, a series of crises in gold bloc countries which caused large capital movements to America, and, second, a gold scare in 1937 arising from uncertainty as to our intention to stick to the new gold price which caused a substantial movement to us of short-term banking funds. These two capital flows amounted to about a billion dollars by the end of 1937. In addition the disturbed conditions abroad to which our policy contributed led us to reduce our own foreign balances and repatriate American-owned foreign securities on a scale larger than the foreign capital flight to us. Almost every European country was put in the position of earnestly defending its exchanges, and we were obliged to co-operate in an orderly retreat on their part from the new system of exchange rates by the use of the new techniques of our so-called "stream-lined" gold standard. Though used co-operatively in this instance these techniques were first developed for defense and were capable of being used for attack.

In 1938, as a result of our failure to solve our own domestic problems we suddenly increased the pressure on the exchanges by developing a merchandise export surplus of about a billion dollars by an extraordinarily sharp contraction of imports. The liquidation of the foreign banking funds piled up here during the gold scare and thereafter provided a means of offsetting this pressure, but since these had been largely built up by gold imports, it was gold that filled the gap suddenly created by the decline in our imports and provided the dollars required to maintain the system of exchange rates and still keep our exports up. The sudden shrinkage in the American market for foreign goods reacted in a very unfavorable way on the economies of many countries, just as dollar devaluation had done. In retrospect I think that few will say that it was in the long-run interests of the United States to administer a severe and dislocating blow to the world economy in the year of Munich.

In 1933 and 1934 we broke the downward spiral of prices and for a time improved the relative position of agriculture in our economy. We did so with the aid of gold imports. But the secondary consequences should have taught us that competitive exchange depreciation is an expensive and not very enduring way to solve the farmers' export and price problems. In 1937 and 1938 we learned that repeated government deficits do not really prime the pump. We were saved from immediate disastrous repercussions of that failure on our export trade by gold imports, but this was a doubtful benefit from a long-run point of view. We should have learned that we do not really gain by exchanging goods for cash either in domestic or in foreign trade. I am far from saying that the policies pursued by the United States were the only causes of the great inflow of seven and a half billions in gold that came to us from 1934 to 1938 but the shocks administered by us to the world economy in 1934 and again in 1938 were contributing causes of importance, and all who believe that the United States has a real interest in promoting a world economic equilibrium and stability during these critical years must include them among the costs of our gold imports.

Our experience of 1937-38 leads me to emphasize the connection between the gold problem and the savings-investment problem suggested in Professor Neisser's paper. Professor Neisser has pointed out that gold imports increase the national income by more than their value by enabling foreigners to continue buying from us more than we sell to them, thereby setting in motion a chain of domestic buying and increasing the value of the so-called "foreign trade multiplier." Under the peculiar circumstances of a continuous and phenomenally large gold inflow, associated with exceptional variations in foreign-owned banking funds and securities and taking place in a period of underemployment of domestic resources, I think that this subject deserves to receive very careful attention in our discussions of the national deficit, private investment, and unemployment. It certainly has a bearing on the "purchasing power" argument in all its phases, including the argument for high money wages and on the calculations of those who seek to relate the desirable size of the federal deficit with the need for offsets to savings.

If we did not already have a surfeit of multipliers, to none of which we can assign definite values, I should be tempted to distinguish sharply between what might be termed the gold multiplier and the general foreign trade multiplier which attaches to all the active items in the trade balance and not to those which are paid for by gold only. I should be tempted to do this because it seems to me very important to distinguish between imports that are bought by banks and imports that are bought by customers of banks. Money expenditures on imports other than gold are taken out of the active internal circulation, just as money savings are. They pass, through the foreign exchange mechanism, into the hands of exporters, just as savings pass through the investment mechanism, public and private, into the hands of producers. But gold imports are bought by banks and not by holders of bank deposits. They are paid for with foreign exchange secured by the banks from exporters in exchange for deposits. No importer's account is charged. There is no transfer of deposits from importers to exporters, but a creation of new deposits in the hands of exporters, using that term in the broadened sense. The three main forms which our exports may take are the sale to foreigners of goods, securities, and banking funds. Up to the amount

of our gold imports, therefore, foreigners, American sellers of securities, and American sellers of goods have acquired newly created deposits. To the extent that these deposits are used, they will have some sort of a multiplier. Since they do not act as an offset to money withdrawn in payment for imports, they must be an offset to other withdrawals, such as saving and hoarding. The multiplicative effect is least when our exports have taken the form of increases in foreign-owned banking funds. It is greatest when they have taken the form of goods, and in between when our exports have taken the form of sales of securities, for then it will depend on the uses to which the security sellers wish to put the cash proceeds. It should also be observed, I think, that offsets to saving of this kind have none of the adverse effects on the expectations of businessmen that public investment does on account of its effect on the budget and its often competitive nature. It seems to me that those who make quantitative estimates of the amount of offsets to saving that have been required in this country to counteract the adverse effects of cyclical depression or secular stagnation should be very careful to take this into account when gold imports are reckoned not in the millions but in the billions. In doing so they should also be careful not to neglect the changes in the capital inflow associated with the gold inflow, and here the experience of 1938 is instructive. In 1938 American banking funds originally put at the disposal of foreigners as a result of gold imports were transferred on a large scale to our exporters of goods. The multiplicative effect of earlier gold imports on our national income had been delayed temporarily by the accumulation of balances by foreigners, but now was felt in full force. A very substantial offset to savings with a good sized multiplier was provided at the same time that the government's cash deficit was eliminated, and these two things were connected. To that extent I cannot resist the conclusion that the argument of those who lay most of the blame for the 1938 depression on the failure of the government to provide sufficient offsets to saving by continuing its deficit is weakened, and the argument of those who look for other explanations in cost-price relationships and in the state of businessmen's expectations is strengthened.

Since the Munich crisis our merchandise exports have been growing much faster than our merchandise imports and foreign banking funds have been accumulated here on such a scale that our gold imports have been at the annual rate of 4.25 billions instead of 1.5 billions as from 1934 to 1938.

The latest Treasury figures show that the short-term capital inflow has recently been of record proportions, but that Great Britain has begun to liquidate securities in this market on a substantial scale to pay for war materials. May we not now be entering into a period when, as in 1938 only on a much larger scale, the gold multiplier is increasing because our current gold imports are passing more directly into the hands of exporters and our past gold imports are resolving themselves, after a delay, more and more into a direct exchange of gold for goods? I suggest that a careful study of this aspect of the gold problem might bring about a reconciliation between the views of those who fear the inflationary effect of gold imports and those who are still on the hunt for offsets to savings.

The foregoing is in harmony with Mr. Hardy's argument that we have thus far been able to absorb all this gold without budget cost and without cost to the public in the form of inflation, because it has come in at a time when the public

was absorbing cash and holding idle deposits on a large scale, but that this situation may come to an end at almost any moment. Mr. Hardy, however, goes on to say that as a consequence the government has been able to indulge in a form of "fiat money financing." I am not sure that I have correctly understood this part of Mr. Hardy's paper. The gold that we have bought has come to us from abroad, and has had to be paid for in foreign exchange. This foreign exchange came, in the last analysis, from those who had it to sell—foreign banks and governments and Americans who had sold securities and goods to foreigners. It was bought by our banks, who gave deposits for it, exchanged it for gold, and sold the gold to the Treasury, which paid for it in reserve funds and then replenished these by depositing gold certificates with the reserve banks. This is the essential nature of the transaction, though I am fully aware that in practice there are a good many different ways of bringing about the same result. For the bulk of our gold imports the Treasury is simply a cog in the machine, and I do not see how this can be described as fiat money financing. It seems to me that the direct effects of the gold imports on the stream of money income in our economy should be sharply distinguished from the indirect effects arising from their influence on reserves. As a result of the piling up of excess reserves, of course, the government has found it perhaps fatally easy to finance its deficits at abnormally low rates of interest, and to sell government bonds to banks thus increasing the volume of deposits. If the ability of the government to do this without inflationary consequences is what Mr. Hardy means by fiat money financing, there can of course be nothing but agreement; but I think that the wording of his paper suggests that the government has in some way financed itself by its gold purchases and that there is some rather direct relationship between the inflow of gold and the increase in money hoarded.

Through its effect on bank reserves and consequently on interest rates the gold flow must be a background factor in the other problems we are to discuss in this series of sessions, and since we are not to go into techniques of credit control, these connections do not require special comment. I should like therefore to return to the question of the layman as to what we are getting out of it when we buy all this gold. It is clear to the ordinary person that from the point of view of the more abundant life a large-scale exchange of goods for gold must be a loss to the standard of living of those who give up the goods. I hope it is clear, also, that such an exchange is a symptom of a very unhealthy condition in the world economy, and that we are a part of the world economy. Yet there have been compensating advantages, aside from those that may have been gained because gold has provided us with an offset to savings. These are best made clear by considering what would have happened had we not bought gold. Until the outbreak of this war we took gold in preference to sacrificing other values. We became the central cog in a machine that maintained in a period of unexampled crisis a very considerable degree of stability in exchange rates. We made it possible for very large movements of capital to take place without disrupting this system of rates to a point where, for example, our trade agreements program would have had to be abandoned, and finally we helped to undo some of the damage caused by our dollar devaluation by permitting successive adjustments in the system to be made in an orderly manner. The mechanism

that we employed in stabilizing the exchanges at this time was based on gold in the sense that the countries using it agreed on prices at which they would buy and sell gold in terms of their respective currencies—on a twenty-four hour basis, perhaps, but still by agreement. This made it possible for each member of the system to convert foreign currencies purchased in the market into gold and thus secure a hedge against losses that might be incurred in case any single currency in the system should depreciate in terms of all the others. This provided the essentials of a system of gold clearance in a truly international world economy, but did not provide the means for enforcing a genuine long-run balance of goods for goods in international trade. Professor Neisser has said that in his opinion, if Great Britain survives, the part of the world not dominated by the totalitarian powers will still have a form of gold standard decided upon by London and Washington. It seems to me that the technical procedures of such a standard will be an elaboration and modification of those developed between 1934 and 1938.² If Great Britain survives there is a possibility that Germany may wish to, or be forced to, choose membership in the family of nations based on mutually advantageous trade rather than continue her present trade methods as instruments of warfare designed to pave the way for ultimate world dominion. In that case such an international gold clearing system would include also the area under German domination. It would not be the gold standard of 1914, or of 1928. It would not even be the gold standard of 1938, because it would have to operate in a world in which the illusion that any country can continue forever to exchange goods for gold will have to be abandoned, and this has a very direct bearing on the many difficult problems which will be discussed in the papers on the United States in the world economy.

The economist should therefore say to the layman who asks why we are buying all this gold, what it is costing us, and how long we are going to continue to have gold dug out of the ground only to bury it in Fort Knox, something like this:

We are buying gold now to help Great Britain, but we are also buying it to preserve its monetary functions for the future when it *can* be made a useful instrument in the long and painful postwar readjustment to an era of peaceful and productive trade.

It is costing us now, first, a real and dangerous threat of inflation, and, second, the postponement and therefore the intensification of those basic economic readjustments that must some day be made, and that have been aggravated time and again since the first world war broke out by the misuse of gold in our monetary system.

We shall continue to buy gold until it is *certain* that it cannot serve us in the conduct of our international financial relations.

After this war is over I am convinced that the era of postponing radical solutions to economic problems will be over also. Voluntarily or involuntarily we shall have to accept the fact that the game of exchanging gold for goods in international trade is played out, and that internal economic balance cannot be

² Cf. my article on "The Probable Future of Gold," *A Forum on Finance* (Columbia University Press, 1939), pp. 203-206.

achieved by the injection of fresh money into the income stream. When the papers which are to follow treat of long-run future prospects, they will have to reckon without gold as a *deus ex machina*. If we have learned the lessons of history we shall approach the problem of readjusting the relation of gold to the monetary system minus the following illusions: (1) The illusions of the early twenties that any set of exchange rates existing prior to a world war can be *normal* for the period after that war, and should be returned to because deviations from it are thought to represent depreciation in gold. We shall not make sacrifices again on the altar of Par. (2) The illusions of the late twenties that the adjustments that have to be made after a world war can be accomplished by corrective forces set in motion by gold movements. (3) The illusion of the middle thirties that every country is sovereign over its exchange rates.

If we are wise we shall also free ourselves of the illusion which has now taken a deep hold of the public mind, that we should somehow put our gold stock to work. To this I think the economist should reply: the great bulk of our gold imports has come here to stay. It has done its work, whether for good or ill. It has left us a banking problem which we shall have to solve by new methods of control, and these we have in abundance if we wish to use them. Some of our gold may be used to finance a return of foreign capital abroad. Some of it may be used as a foundation for setting a new system of international clearance going again. But the bulk of it could only leave us as the result of an upheaval as great as that which brought it to us.

With these illusions banished we can approach the future with a new realism. We can be reasonably sure of some things about the future—sure enough at least to prepare for the following conditions:

1. The world will be impoverished.
2. Many countries will be in possession of blocked assets in other countries, built up by goods shipments, but which cannot be used to buy the things desired where they are or by sale in a free exchange market.
3. This situation will be met in part by the formation of larger economic units. If Germany wins, the existing Continental multilateral clearing system will be further developed. If Britain wins, and I do not, like Professor Neisser, rule out this possibility, there will also be larger economic units. In the minds of many who are planning for the future this may extend to the formation of groups of countries, including colonial areas with complementary economies, having in effect the same currency and without tariff barriers. In either case within the larger units the basis for small and restricting clearing and compensation agreements and the existence of blocked accounts will be undermined.
4. If Britain does not win but survives without Continental influence, then there will be side by side with a multilateral Continental clearing system focused on Berlin, a large multilateral sterling clearing system focused in London. The United States and its economic dependencies will be another such system. Russia and its dependencies will be another and there may be a yen bloc as well.
5. There will be trade among these large areas in every direction but this trade will not be free in the sense that it will be governed solely by price considerations. It will be controlled and the rule will be applied that those who will

not buy cannot sell. There is no guarantee that our own system of quotas and export licences, now only partially developed, may not have to be continued and even extended.

6. There will be in existence a well-organized machinery for the control of capital movements which can be used to prevent such movements when not related to the exploitation of natural resources, the financing of trade between the large areas, or compatible with the general aims of currency management.

This increase in the element of control in the field of international relations will be found in harmony with the emphasis on more government control in other fields which will be found in the papers we are to hear later. But it is important to emphasize that these controls *can* be used to promote if not free then at least mutually advantageous trade, and if so used they can be gradually relaxed. This aim will be greatly facilitated if the greatest possible generality is given to the clearing process between the large units. Gold clearing is the appropriate instrument for this purpose, and the techniques worked out from 1934-38 can be adapted to provide this gold clearance. This system will impose some sacrifices in sovereignty over domestic credit policy, as Mr. Hardy has stressed in dealing with the gold standard of the twenties, but this is a part of any system which is both peaceful and international. There will be great pressure in the United States to break through the restraints imposed by such a system. There will be an outcry, already heard with reference to Latin America, for large international credits to finance the transition to a peacetime economy by expanding export markets, but the first consideration governing such loans should be not how much immediate relief they will give but how they are to be repaid. I hope that if, in the papers on agriculture, employment, and investment, the development of the export market is mentioned it will always be accompanied by reference to its Siamese twin—more imports. If we do not accept the limitations of such a system voluntarily, but have large-scale resort to credits, then I think the result will be that we shall see the proceeds of our exports and the funds accumulating abroad for the repayment of our loans and advances impounded in blocked mark, blocked sterling, and blocked yen accounts, and the opportunities for working out of this situation greatly restricted by the limited scope that will be given for multilateral clearing between the big areas. The experience of all countries trading with Germany in recent years has demonstrated the advantages that accrue to debtors under such a system, and the experience of the past thirty years should have warned us of the dangers of accepting more gold in payment or lending in the hope that something will turn up to rescue the creditor in the future.

What I have just said concerns a possible set of alternatives after the war; that is, during the next period of peace. If, however, Germany should win the war of arms, should then elect to continue the economic war by offering very favorable barter terms of trade to all countries in which our exports compete, and should attempt to force a destructive competition in our own markets by the use of export subsidies raised by levies on the whole subject economy of Europe, a different situation would face us. We should be very ill-advised, as Professor Neisser has said, to supply Germany with goods in exchange for gold obtained by her from conquered countries, and to follow that up by entering

into the trap of accumulating credit balances in blocked marks in order to serve the short-run interests of our export trade. We should, I believe, then have to accept the challenge of economic warfare, and I feel sure that neither the vested interests of the gold mining industry nor the ignorance of the public on monetary matters could force us to strengthen the arm of those waging such a war against us by giving them goods in exchange for an asset that would not yield us any equivalent advantage.

FEDERAL BUDGET: ECONOMIC CONSEQUENCES OF DEFICIT FINANCING

(Two main papers and two review papers)

DEFICIT SPENDING

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During the past decade of continuous deficits our thinking about fiscal policy has passed through a number of fairly definite phases. The early deficits were the automatic result of the depression. As the national income declined by one-half from 1929 to 1932, the federal revenue likewise declined one-half, while expenditures remained unchanged. The only fiscal attack upon the depression was not through "income creating" expenditures, so much discussed later on, but through what may be called "capital repair" expenditures by the Reconstruction Finance Corporation created in 1932. The Democratic party ran its campaign of that year on the issue of economy, attacking the budgetary deficits in general and the RFC expenditures in particular.

It is very difficult to say when the Roosevelt Administration began to think of deficit spending as a means to recovery. In this country it is always hard to define "the" Administration as distinguished from its personnel, which includes a large number of legislators, administrators, advisers, and research men all of whom, within the limits of their opportunities, are seeking to exert their influence but are by no means pulling in the same direction. And to all these must be added the numerous and diverse outside influences working upon and through them. In consequence, major changes of policy are likely to come slowly, and their origins are often difficult to trace. Undoubtedly many persons within the Administration favored deficit spending as a deliberate policy for recovery considerably before any such policy publicly emerged.

In the early part of the first Roosevelt Administration, there was little or no evidence that public spending was to be a major policy of recovery. It is true that some early steps to cut expenditures were soon reversed, but the main emphasis for recovery in 1933 was on monetary policy and especially on raising the price of gold, with the repeatedly announced goal of raising commodity prices to the 1926 level. There was also the quite different approach through NRA, and much discussion of the contradictory character of these two major attacks upon the problem. The NRA policies had, in my opinion, an important bearing upon deficit spending. By raising costs they impaired its effects. They were related also in the sense that it was intended that the code activities under General Johnson should be accompanied by a public works program under Mr. Ickes, which gave rise to subsequent com-

ment that the chief mistake may have been in not reversing their roles. But in this early public works program, which as it turned out amounted to very little, there seems to have been little or no emphasis on *deficit* spending as the means to recovery, and federal deficits were defended mainly on humanitarian grounds as necessary to provide temporary relief for unemployment until recovery could be achieved by other means.

Some date the beginnings of a conscious policy from Keynes's visit to this country in June, 1934, when he said that if we spent two hundred millions a month we would go back to the bottom of the depression, a net monthly deficit of three hundred millions would hold us even, and one of four hundred would bring full recovery. Keynes gave this formula, the precision of which I have always admired, to various meetings of economists and doubtless also to the Administration. There was no indication, however, then or for several years later that the government was deliberately pursuing a deficit policy as a major means to recovery, and the President's budget messages continued to promise an early balancing of the budget.

The fact seems to be that as interest in other recovery measures waned, while the deficits continued to be large, there was a growing disposition on the part of many persons, within and without the Administration, to regard the deficits themselves as the major cause of the recovery. The first evidence that the Administration, as distinguished from a large and influential group within it, had adopted this view came during the new depression of 1937-38, when, after a protracted internal debate, a new spending program was hastily improvised in the spring of 1938, and passed by Congress. A similar program put before Congress in the spring of 1939 was defeated. Since then we have had the appropriations for the defense program, which has raised other issues than that of spending as a recovery measure and has had the support of the whole community regardless of attitude toward the earlier deficits.

I have begun with this reference to our experience because it helps me, at least, to see our problem in better perspective. There is an inevitable human tendency to rationalize experience, and as events have unfolded over the past decade there has been much shifting of positions as to theories and policies. I do not say this critically, but merely to remind us of the need for caution against overhasty conclusions that we have found in fiscal policy the key to the control of economic changes. It will help us all to recognize that in 1930 no advocates of deficit spending, if there were any, contemplated that by July, 1940, before the present defense program got underway, we would still have a deficit, that the expenditures of the fiscal years 1940 and 1939 would be the highest of the entire decade, exceeding even those of the year (1936) in which the soldiers' bonus was paid, or that for the entire decade the yearly revenue would average only 60 per cent of the expenditures; and this in spite of the fact that the revenue had been tripled

since the bottom of the depression, with new taxes imposed and tax rates raised, and was about 50 per cent higher than in 1929.

I

It is encouraging, however, to realize that what I have called our rationalizations have been in accordance with a logical pattern. We have not had occasion to change our fundamental analysis of economic fluctuations so much as our ideas about the methods of controlling them. There have been, also, and quite naturally in view of the severity of the depression and the slowness of recovery, changes in emphasis upon the different elements in the analysis and upon the scope and gravity of the problem. The analysis itself is a logical unfolding of ideas prevalent in monetary and business cycle literature during the twenties and has its roots much farther back, in the writings of Wicksell and others. This is the analysis of the flow of income and of the dominant role played by investment in fluctuations of income, output, and employment.

During the twenties the emphasis was on central bank policy. The central bank, by its control of reserves, could control the quantity of money, which controlled the interest rate, which controlled investment, which controlled the business cycle. There was a shift of emphasis from the short-time rate to the long-time rate. There was a growing interest in the "natural rate," which equates saving and investment. There was a shift of emphasis from the rediscount rate to open-market operations. There was the controversy over federal reserve policy with relation to the stock market boom, with much discussion as to whether, by failing to raise rates soon enough and high enough, the Board had allowed the security boom to run to heights from which a general depression was bound to follow, or whether by attempting to pursue a restrictive policy toward security speculation, which was not its legitimate concern, it had through high money rates and contraction of the money supply brought on the very depression which it feared.

When the depression came, as already stated, the emphasis continued to be on central bank policy and the interest rate, with much insistence that open-market operations were not large enough, not begun soon enough, or not continued long enough. When these operations resulted in excess reserves, and the latter were greatly increased after 1933 by gold inflow, there was at first considerable interest in how much excess reserves it would take to break down the bankers' liquidity complex; but as the excess reserves continued to pile up and attain huge dimensions and interest rates sank to levels never previously reached, it was generally recognized that, whatever may have been the defects of central bank policy, the main trouble lay in the inadequacy of the interest rate, by itself, to control investment and the cycle.

I have not space to discuss in detail the reasons for the inadequacy. They were those cited by the reviewers of Keynes's *Treatise*, and expressly or

tacitly accepted by him in his *General Theory* six years later: the fact that interest is but one of the costs of investment and unlikely to be controlling one, even though more important in long- than in short-time investment; the importance of expectations, which play so large a part in his later book but were minimized in the earlier one; the fact that there is not one rate of interest but many, variously affected by risk, market organization, and other factors which not only set a bottom limit under most rates really pertinent to the control of investment (and leave some of them merely rigid at high levels) but also produce a perverse cyclical variation such that when the rates most subject to monetary control are falling in depression and rising in a boom in response to central bank policy, other rates are rising and falling in response to expectations of income affecting risk. In recent years the interest rate discussion has entered a new phase, with a growing recognition that rates may be both too high and too low at the same time, the low rates accomplishing nothing further to stimulate investment while causing injury to many institutions and individuals, while the high rates may still be retarding investment in some directions. And there has been growing recognition that this condition calls for other methods of attack than the traditional central bank methods.

II

Deficit spending is the logical sequel to central bank policy, and it was entirely logical that its first phase should be pump-priming, for the latter does not differ in purpose or in general analysis of the problem from central bank policy, but seeks to make more effective the methods of attack. The financing of deficits represents a further step toward making an easy money policy effective, for when combined with pressure through reserves, it affords an avenue for expansion of bank assets and deposits accompanied by a declining yield on government securities. In addition to the new money thus created, government borrowing provides an outlet for old deposits which might otherwise remain idle rather than assume the risks of investment in depression. Theoretically, the fall of the rate on government securities should spread to other investments and loans, attracting both bank and nonbank investors, until after a transition phase of refunding of old securities, the new issues market is affected and a stream of new investment set in motion. To some extent, this process has been discernible but when we review our experience as a whole, it is disappointing. The combination of deficit financing and excess reserve has accentuated the cleavage between interest rates too low and too high, and though there was some increase in activity in the market for new capital prior to the downturn of 1937, the entire period since 1933 has been characterized by a much smaller volume of new security issues than in the twenties, or in earlier periods on a comparable basis.

The main contribution, however, which pump-priming sought to make

toward overcoming the inadequacy of central bank policy, was in the deficit spending itself rather than the method of its financing. If lowering the interest rate would not, by itself, sufficiently induce investment, this object could be achieved through the creation of new consumer income by means of deficits. Investment in producers goods would thus be induced through increased community spending on consumers goods. There was a presumption, at least at first, that under this combined stimulus of income creation and low interest rates, the deficits would not need to be large or long continued. The budget would have a diamond-shaped pattern corresponding to the business cycle, with deficits in depression and surpluses in boom periods both tapering from the turning points.

The main emphasis was laid on the multiplied and cumulative effects of the spending. It was in connection with pump-priming that the multiplier concept first came into our discussions. I do not pretend to have understood or even to have studied carefully the many ramifications and refinements of this concept as it has been applied, either alone or in combination with the acceleration principle, in this and later versions of fiscal theory. This has become one of the dialectical tilting grounds in economics, of which there are always several in each generation, and like so many others in the past it probably will not justify the time and ingenuity expended on it. I am similarly unimpressed with the attempts to find multipliers statistically for various countries. Perhaps the simplest version of the multiplier and the one most useful for the pump-priming analysis is that which considers the effects of an initial or primary deficit spending as a sequence through time, the secondary effects being the sum of the successive consumer incomes during the period, each multiplied by the percentage of income received which is spent, which in turn depends upon the percentage of leakage through saving. In the pump-priming theory, the combined primary and secondary spendings, with which alone the multiplier is concerned, would lead to tertiary spending, which is the induced investment; the investment would then have its own multiplied effect, and so on cumulatively, with deficits tapering, until the opposite phase of the cycle is reached and surpluses appear.

I do not think it is profitable to take time to discuss pump-priming in detail. Our own experience has not in general conformed to the expectations of its advocates as to the amount of induced investment or as to budget tapering, and certainly not to the expectation that there would presently be budget surpluses. I am inclined to side with those who hold that this kind of spending, in the form of relief to consumers, does not reach down far enough into the productive process to provide effective leverage, but soon dissipates its force in consumer transfers without much effect on investment, save possibly on short-run investment. Other comments I have to make seem equally applicable to later versions of fiscal theory and can be given later.

The vogue of pump-priming was prior to 1936-37. In 1936, Keynes, who had done most to stimulate the pump-priming discussion with the pamphlet on *The Means to Prosperity* (1933) and his disciple Kahn's article in the *Economic Journal* (1931) on the multiplier, published his *General Theory*, which dealt not with the business cycle but with a secular tendency toward underemployment. In this country, the recovery gave way in 1937 to a new depression at a time when the budget for a brief interval came into balance not through reduction of expenditures but owing partly to the mistaken policy of building a social security reserve, and even more to the fact that with rising national income the federal revenue substantially increased. The conviction grew that we were faced with something more than cyclical recovery from a major depression. The emphasis shifted from pump-priming to the need for deficits as compensation for long-run structural changes in the economy; deficits which might be permanent or at any rate should be continued so long as underemployment prevailed.

There is an interesting literature of the transition from pump-priming to long-run compensatory spending. Some of it is contained in the presidential messages after 1937 and in the discussions by senators and administration leaders of the spending act of 1938 and the spending bill of 1939. In the discussions of economists I have been interested and sometimes puzzled by the further treatment of the multiplier. The view has been expressed that deficit spending is not pump-priming in its effects because while it is self-multiplying it is not self-perpetuating. Standard models have been constructed which show that deficit expenditures have only a limited amount of leverage. It has been asserted that only investment and public spending have a multiplier.

In these views, it seems to me there is some confusion of thought. Every expenditure has a positive multiplier and every failure to spend a negative multiplier. What matters is the net change from period to period and not the character of the expenditure. Investment offset by saving has no net multiplier, and consumption beyond current income has such a multiplier, whether the consumption is financed by borrowing from the banking system or by previously accumulated saving. No expenditure of any kind has a self-perpetuating effect, and the multiplied effect of any expenditure is bound to be limited if there is any leakage at all through saving. But these facts tell us nothing as to whether deficit spending has pump-priming effects. What we need to know is its effects *outside* the multiplier, whether for example it does induce investment which induces further investment, or whether, if it does not, the fault lies in some other effects of deficit spending or in the character of the expenditure or in secular changes which have reduced the opportunities for investment, and so on. Not the least of our dangers is that of confusing this rather mechanical monetary concept with the deeper-seated forces with which we should be mainly concerned in our analysis of the economic effects of deficit spending.

III

Since 1936, as I have said, the emphasis in fiscal theory has been not on stimulating private investment, temporarily depressed, but on compensating for the lack of it. This is a fundamental change. It rests on the view that private capitalism is no longer capable of providing full employment. Two explanations of this defect have been offered: the oversaving theory and the underinvestment theory. It is important to recognize that these are two distinct explanations, though they can be combined and to a large extent have been in recent discussions.

Keynes's oversaving theory is derived from "psychological laws" operating in the institutional framework of modern private capitalism. Most important is the "propensity to consume," according to which as income rises a part of the increase is saved. Keynes believes an increasing fraction is saved, but this he says is not part of the law. To prevent reduction of income, output and employment, investment must increase equally with saving, but investment is limited by the "marginal efficiency of capital" (diminishing productivity as interpreted by "expectations"); and the cost of investment cannot be reduced sufficiently by lowering the rate of interest because at some minimum rate we prefer liquid funds to the risk of investment. Net idle saving forces income and employment down to some level at which, through the decline of saving, investment and saving become equal. To get more income and employment we must have deficit spending to offset idle saving or must tax away and spend the idle saving. This fiscal policy should be accompanied by monetary action to reduce interest rates and overcome, so far as possible, the effects of "liquidity preference."

This theory could never account for a depression without bringing in cumulative cyclical factors, which are not a part of the analysis. It merely tells us that as we progress to higher income levels, progress becomes harder; according to the "law" it is only as income rises that more is saved. What I have to say about employment, which is Keynes's chief criterion of progress, applies also to the underinvestment theory and will be given later.

Keynes's statement about the "propensity to consume" is a plausible hypothesis. Its application is limited by the fact that it cannot be applied to producers' saving, or at any rate to corporate saving which is an important part of the whole. It is further complicated by the fact that there is an opposite tendency in the business cycle, which Keynes had previously described as an excess of investment over saving in the boom and an excess of saving over investment in the depression. Though this is an inaccurate picture of the cycle, which I prefer to describe as a cycle of spending and not-spending, it illustrates the complication. Of course, both statements could be true, with the cyclical tendency riding on the surface of the more fundamental one.

In discussions of fiscal policy Keynes's hypothesis about saving has

been too readily accepted as law or as fact. No one, so far as I know, has yet given us estimates of saving of a kind that really bear upon this argument. The data that have been most cited in discussions of fiscal policy—those of Kuznets and Terborgh for this country and Colin Clark for England—are estimates of realized investment. In the testimony at the TNEC hearing on saving and investment the data presented, which were called "offsets to saving," represented real investment. The most ambitious attempt to compare savings and investment is the SEC study by Goldsmith and Salant, but this deals mainly with real saving and investment. The same is true of the earlier Brookings studies. As Keynes pointed out in his book, real saving and investment must be equal. What is needed for his thesis is a study of *monetary* saving and investment. I appreciate the difficulty, perhaps the impossibility, of making such a study but until we have it we continue to deal with a hypothesis.

One kind of proof that has been offered seems to me no proof at all. The unprecedented growth of demand deposits in recent years has been accompanied by a great decline in velocity. This decline has been cited variously to prove "lack of confidence," lack of opportunities for investment, and the reality of the tendency toward oversaving. Taken alone it proves nothing but the failure of the increase in the money supply to induce spending. If in an effort to stimulate investment the money supply is doubled, but without effect, should we say that owing to the law of the propensity to consume the money has been saved? This kind of saving could readily be cured by reducing the money supply. We cannot identify saving with a decrease in velocity of money if the latter merely reflects an increase in money quantity. What other causes of reduced velocity there may have been is open to such interpretations as I have cited.

The underinvestment thesis has a better factual foundation than the oversaving theory, and presents a stronger case for long-run deficit spending. It is based on the view that as the capitalistic economy progresses it reaches a stage at which the opportunities for investment decline. This "mature economy" thesis is too familiar to require elaboration. It uses, in general, the same analytical apparatus as the oversaving theory, starting from the same truism that investment plus consumption equal income. It has the same criterion of prosperity: full employment. But the decline of opportunities for investment is not in the other theory, and the tendency toward oversaving is not necessarily a part of this one, though, as I have said, in much of the recent discussion the two have been combined.

The reasons why as an economy matures investment opportunities decline have been presented with great force and much statistical support. Some of them carry considerable conviction, particularly as regards their bearing on employment. This is especially true of the technological changes from capital-using to capital-saving devices. I am less convinced by the

reference to declining rate of growth of population, not only because it relates to individuals rather than to families, but because it unduly subordinates, I believe, the possibilities of changes in quality (standard of living). The argument about the passing of the frontier seems to me not one of the strongest, largely because I am influenced by my earlier studies of international trade, which showed that trade was greatest not with the frontier countries but between the industrially developed countries having higher living standards and greater purchasing power. But as regards employment there may be no easy substitute for free land.

One of the most difficult and necessary tasks is to compare our experience of the past decade with the earlier great depressions, sifting out the elements of similarity and difference. Economic progress in the nineteenth century was very great but it came by jerks with recurring periods of unsettlement and stagnation. Each period had its special characteristics but economic maturity was not one of them. In how far is this latest experience ascribable to this new circumstance? Has this last experience been essentially different from the others or merely on a larger scale? The most difficult matter to square with the mature economy explanation is what happened in the rest of the world. This country stood virtually alone, except for France, in its failure to surpass substantially the level of output of the twenties. This difference cannot be accounted for by military expenditures except in a few cases, notably Germany and Japan. In England military expenditures were not an important influence before 1938 and in many other countries such expenditures were not a major factor in recovery. Yet many of them, especially England, are more mature than this country.

One plausible explanation that has been given of our virtually unique experience is the greater severity of our depression, following the greater expansion and the speculative boom of the twenties. The recovery from 1933 to 1937 was not only one of the longest in our history but compared very favorably in amplitude with any previous recovery. It began, however, from such a low level that the volume of output at its peak only slightly exceeded that of 1929. During the last year of the recovery the expansion consisted to a marked degree of inventory accumulation and forward buying. The ensuing decline, as always from an inventory boom, was sharp but not of long duration. I expected that the recovery would soon be resumed and would carry us well above the level of the twenties. There were clear indications that a new recovery was under way before the outbreak of the war and the defense program created a new situation.

IV

While the mature economy thesis does not seem to me a satisfactory explanation of our experience during the past decade, it remains an important concept for fiscal policy, and the future role of deficit spending

will probably be strongly influenced by our understanding of its implications. I have felt for some time a need for clarification of this concept.

I entirely agree that as an economy matures investment tends to decline relative to total income, but what to conclude from this fact is less clear. As production has become more capitalistic, replacement has become the preponderant part of gross capital formation. The TNEC testimony showing that a number of our large corporations have relied increasingly upon depreciation allowances for capital improvement was corroborative of this trend. Kuznets has shown that in this country in 1919-35 replacement constituted 68 per cent (1929 prices) and new investment 32 per cent of the yearly average volume of gross capital formation. Leaving out public agencies his figures were 81 per cent replacement and 19 per cent net capital formation.¹ Colin Clark has shown that the yearly additions to British home capital have been declining since 1875. His figures of net investment as a percentage of national income show a decline from 12.2 per cent in 1907 to 8.1 per cent in 1924, 7.2 per cent in 1929, and 6.9 per cent in 1935.²

But the British national income has continued to increase and perhaps never more notably than in the decade of the 1930's. What has changed is the character of the problem of economic progress, which has become increasingly that of taking advantage of opportunities to improve the capital we replace and the efficiency with which we use it. From this point of view, an increase in the obsolescence rate might well be of greater importance in determining real income and productivity per worker than the search for new outlets for further capital investment. And we should add, of course, that it is by no means certain that such outlets will not continue to be found, even in the mature economy. Colin Clark's own conclusion is:

I believe the facts have destroyed the view up till now generally prevalent, that the rate of economic growth was primarily dependent upon the rate at which capital could be accumulated. The very rapid expansion at the present time [before the war] is taking place at a time of heavily diminishing capital accumulation. What is more remarkable, practically none of the capital which is being saved is being put into productive industry proper.

Economic progress involves an increase of income not only in relation to investment but also in relation to employment. In much of the monetary analysis of the past twenty years, income, output, and employment have been treated as counterparts which respond equally to changes in saving and investment. This may have had some advantages for short-run analysis, though it has led to much mechanical thinking in which employment has been regarded as an economic end in itself regardless of its character. It is the logical result of the savings-investment analysis that full employment should be the goal of fiscal policy. But the goal of economic progress is income, and the two do not have a fixed relation.

¹ *National Income and Capital Formation, 1919-35*, p. 49, and table 14.

² *National Income and Outlay*, p. 270.

The rise of income relative to employment through the advance of technology has been one of the great economic phenomena of our times. It raises questions which thus far monetary and fiscal theory have refused to face. But we are making some progress. We have begun to stop identifying underemployment with depression. Now that under the stimulus of the defense program and British war buying national income has risen substantially above any previous level while some seven million workers are still unemployed, it is beginning to seem inappropriate to describe a state of less than full employment as "stagnation," even in a technical monetary sense. But the lesson drawn is that we must spend more rather than less, for full employment remains the goal of fiscal policy.

Last summer Keynes published in the *New Republic*^a a most significant article in which he referred to the failure of deficit spending to produce "anything like full employment in the United States." He ascribed this failure to the "gigantic powers of production" of a modern industrial economy. To quote:

Coupled with institutional factors which tend to encourage accumulation and retard the growth of consumption when incomes increase, this means that an unprecedented output has to be reached before a state of full employment can be approached. The full industrial and agricultural capacity of the United States may well exceed 1929 by as much as, or even more than, 1929 exceeded 1914. . . . The conclusion is that at all recent times investment (and public) expenditure has been on a scale which was hopelessly inadequate to the problem. . . . It appears to be politically impossible for a capitalistic democracy to organize expenditure on the scale necessary to make the grand experiment which would prove my case . . . except in war conditions.

On similar reasoning, a number of American economists have recently said that our mistake in the thirties was in having annual deficits of some three billion dollars; they should have been ten to fifteen billions. My own view is that such a "grand experiment," besides being politically impossible in a democracy in peacetime and besides, incidentally, probably destroying democracy if it were tried, would not "prove the case," because the case as stated misconceives the nature of the problem. We have been accustomed to think of technological change as a temporary phenomenon temporarily displacing labor but through falling costs and widening market creating full employment once the state of technology has settled down. But the great question raised by modern experience is whether technology does settle down. Technological advance was very great during the twenties, but Keynes says his public spending experiment failed because technological progress was much greater in the thirties. How ironical it would be if the ten-billions-a-year experiment should fail during the forties for the same reason.

I suggest that one important feature of an advanced capitalistic economy is that human labor becomes progressively the less efficient instrument of production compared with the alternative methods, which as I have already said, depend progressively less upon new investment in the quantitative

^a July 29, 1940.

sense and more upon new technique. The economic function of the producer is not to employ labor but to produce goods. At every step he faces anew the question whether to use more men or better machines and processes. Even in the present defense program the purpose will be to get maximum output rather than full employment. Even in England today there is complaint of unemployment. Even if we should attain full employment during a great burst of activity when we are taxing our economic capacity to the utmost and in our urgency cannot confine ourselves to the most efficient methods, it would not be permanent, even if that level of output should continue.

In monetary and fiscal theory unemployment is taken as a sign of waste. If it is pointed out that we can and in fact have increased income to new high levels without removing unemployment, the answer invariably given is that with full employment we would have still higher income. Keynes in the article I have quoted said: "The wealth producing capacity which is now going to waste in the United States is so far beyond our powers of measurement that it is useless to hazard a figure for it." But if we look at the problem as one in economics rather than simple arithmetic this is not so clear. There are always unutilized resources, material as well as human. Indeed, if this were the only question, why stop with the resources at hand? Why not count our unborn children among the unemployed? There is no other criterion of usability than the question does it pay in all the given circumstances. The question of waste of resources through unemployment can only be put to the test by increasing economically desirable output and if in such a test we find ourselves resorting to other means of production than human labor, the problem, whatever else it may be, is not one of economic waste.

I am not suggesting that unemployment is not our most serious human problem or that it is not the duty of government to provide for unemployment. The implications of what I have said for fiscal policy I will consider later.

A third important feature of a mature or advanced economy has been the growth of durable consumers goods. Terborgh has presented some striking figures for the United States from 1919 to 1939.⁴ Of total expenditures (private and public) on all durable goods, producers and consumers, of 380 billion dollars, consumers durable goods amounted to 196 billions. The largest category—household goods—amounted to 91.3 billions or 24 per cent of the total. Residential housing amounted to 52.4 billions or 13.8 per cent. Manufacturing and mining expenditures for plant and equipment were 13.3 per cent, government expenditures for construction 12.1 per cent, passenger automobiles 11.8 per cent, and electric power and railroad expenditures combined 5.6 per cent.

Among the modern institutional changes which monetary and fiscal

⁴ *Federal Reserve Bulletin*, September, 1939.

theorists have cited as preventing full employment have been those "retarding the growth of consumption," to quote again from Keynes's article. This is the other side of the oversavings thesis, but I have never seen the evidence to support it. I agree that a less unequal distribution of income would probably increase consumption, and that this is a legitimate concern of fiscal policy. I agree also that heavy taxes on consumption are undesirable when national income is depressed, or when there is less than full utilization of *economic* capacity (which is not to be confused with employment), though we cannot assume that there are not limits to taxes on higher and middle incomes beyond which not only consumption but economically desirable saving and investment will be impaired.

But to favor such policies is not to concede that in fact institutional changes have retarded the growth of consumption relative to income. It is doubtful whether in the more advanced countries the inequality of incomes has become greater during the last fifty years. Colin Clark in his latest book⁵ presents evidence that consumption has been rising relative to income in Great Britain, Germany, and the United States. Certainly the growth of durable consumers goods, as Terborgh's figures indicate, has been one of the great phenomena of our times. It is a chief reason why I believe we have made too much of investment both in cyclical and in secular analysis. It bears also on the question of "outlets for saving," for while these are consumers goods their financing bears the same kind of relation to accumulated saving, and to credit from the banking system, as producers' capital goods. Their bearing upon the multiplier I discussed in an earlier section. Since the first world war durable consumers goods have played a major role in economic fluctuations; nor is it possible to prove either from the data or by general reasoning that this type of expenditure has been the "passive" factor.

V

My purpose in this paper has not been to present a program for fiscal policy but to give some of my reflections about its theoretical foundations. I must, however, in concluding try to point out briefly some of the implications of what I have said for such a program.

The case for permanent deficits as compensation for oversaving and underinvestment tendencies seems to me unproved and based in considerable measure upon misconceptions of the nature and effects of the secular economic changes which are observable. I believe, further, and I think it follows from the logic, that if deficit spending were permanently carried on as compensation for tendencies toward contraction which would otherwise exist in the economy, and especially if we should take as our goal full employment, it would either eventually break down or would entirely transform our democratic, private capitalistic system; for its cost would

⁵ *The Conditions of Economic Progress.*

become a constantly increasing fraction of the national income. I cannot stop to consider the banking and monetary aspects of such a policy, which are recognized by all students to be difficult. In so far as it is desirable to modify the flow of income it can be better done by taxation than by deficit spending. But the economic effects of different kinds of taxes constitute an intricate and difficult field which is even more in the pioneer stage today than deficit spending. We cannot proceed very fast or very far on a general formula about saving and consumption; and if we are seriously concerned about tendencies toward decline of investment, we must have due regard for the effects of tax measures upon risky investment. As a preliminary to a good tax structure, moreover, we must some day have a thorough overhauling of state and local in relation to federal taxation.

What I said earlier about the relation of income to employment points to the need for a permanent relief organization within a balanced budget. It is closely related also to old age security. One way to meet the problem may be by shortening the average work-span of the employed. Other questions are the flexibility of wages and the mobility of labor and enterprise. Another approach is through education for employment to help solve the problem of labor shortages existing side by side with unemployment. But I must leave this whole problem to others who know more about it. I can see no easy solution. Certainly I do not see it through deficit spending. As stated earlier it would clarify our thinking about fiscal policy to drop the criterion of full employment and think in terms of income.

It does not follow from what I have said about permanent deficits that governments should do no long-run borrowing for peacetime purposes. It has been desirable in the past, in this and many other countries, to do some of our investing collectively; and a moderate public works program for productive purposes, adjusted as much as possible to business cycle changes, is not inconsistent with the views I have expressed. There is a vast difference, both conceptually and quantitatively, between a policy of public betterment, based on what a country needs and can afford, and that of spending to get long-run full employment.

In the business cycle deficit spending can be of real assistance. For this purpose a large budget has advantages, for the automatic changes in it in response to economic changes can be large enough to have considerable effect, especially if we refrain on the decline from imposing new taxes or raising tax rates. Relief and unemployment insurance expenditures would add further flexibility and would probably have some pump-priming effect under conditions favorable to business confidence. One important requirement, I believe, would be to taper the deficits. It is in the tapering that the business cycle use of deficit spending comes most in conflict with the long-run view, for it involves a presumption that apart from the cycle the economy can be self-sustaining. Those who are convinced there are deeper

seated contractive tendencies will want to spend sooner and will resist tapering on recovery. It has been my belief that if we could have begun to taper the deficits in 1935 when recovery was well under way, and could have avoided the labor difficulties of 1936-37, we might have avoided the new depression and carried the recovery to higher levels before the outbreak of the war.

One of the chief dangers in fiscal policy is the tendency toward exaggeration. We are behaving toward deficit spending as we behaved toward monetary policy in the twenties, expecting too much from it and defending partial failures by asking for larger applications of the treatment. With the recent requests for doubling or quadrupling the deficits we have reached about the same stage as in our insistence a decade ago upon larger and larger open-market operations.

Such overemphasis not only discredits fiscal policy but diverts attention from the need for other action. This has been particularly true as to price and cost behavior. Price and wage disturbances had more to do with the depression of 1937-38, I believe, than the sudden accidental balancing of the budget. One of the chief dangers in a spending program is that if not wisely applied it may raise prices and wage rates and interfere with its own success. One of the chief weaknesses of Keynes's analysis is his failure to see the importance of wages as a factor in cost of investment. In this country the confusion about wages and recovery, the failure to see that high wage rates are a result and not a cause of recovery, has done much to impair the effectiveness of deficit spending and other recovery measures.

Another consequence of exaggerated emphasis has been to make us think too much in terms of the aggregates of the income flow analysis. At the TNEC hearings already mentioned, the emphasis was on the contraction of investment in the thirties owing to oversaving and underinvestment and the consequent need for deficit spending; but the deficiency shown was mainly in housing, and to a smaller degree in business plant, and suggested the need for a housing program and an examination of conditions in the construction industry.

None of the comments I have made in this paper suggests that we should discard compensatory fiscal policy. On the contrary, nothing seems to me more important than that we should continue in the light of accumulating experience to study how to fit fiscal policy into a more rounded economic program. In so doing we must consider how fiscal policy can be used to preserve and improve rather than to destroy our present economic system and our democratic institutions.

THE FEDERAL BUDGET: ECONOMIC CONSEQUENCES OF DEFICIT FINANCING

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Since 1930 the federal debt has increased about 175 per cent, from about 16.2 billions in 1930 to over 44 billion dollars in October, 1940. Economists probably differ somewhat in their appraisal of the seriousness of this increase; but all would agree, I believe, that such a rapid increase in the public debt has had, and must continue to have, economic consequences that warrant careful analysis. Particularly does the situation call for reconsideration and reanalysis in view of the certainty of still further increases in federal expenditures in connection with the National Defense Program, and in view of the dreary prospect faced by the United States of having to engage for years to come in an armament race, if not in war itself.

This enormous increase in the federal debt is of course one of the effects of the depression; more accurately, one of the effects of the particular methods employed by the Administration since 1933 in combating the depression. There is nothing new about deficits for governmental units in time of depression. In such periods it is to be expected that governmental receipts will decline, while expenditures fail to decline proportionately, or even increase. There is, however, a difference between a fiscal policy designed simply to alleviate the distress accompanying a severe depression and a fiscal policy designed to produce recovery through a deliberate unbalancing of the budget. The former policy is based on the assumption that the deficit is the lesser of two evils; the latter, on the assumption that deficit financing in such a period is a positive good. It is the latter policy which has been followed since 1933. The new aspects of our recent deficits have been their extraordinary size, for peacetime, and the complacency with which they have been incurred. They have been viewed as a necessary and important means of promoting recovery itself.

The term deficit financing will be used here to refer to this latter policy of promoting recovery through a deliberate unbalancing of the federal budget, a policy based on the expectation that a substantial excess of federal (income-increasing) expenditures over (income-decreasing) receipts will so increase consumers' incomes and demand that eventually there will be a more than proportionate stimulation of production activity, private employment, and finally private investment.¹ It is the purpose of the present paper

¹ For a statement of the multiplier doctrine and of the closely related but distinct conception of pump-priming, see: G. Colm and F. Lehmann, "Public Spending and Recovery in the United States," *Social Research*, III (1936), 129-166; S. E. Leland, "Our National Debt," *Harvard Business Review*, XVI (1937-38), 257-272; A. D. Gayer, "Fiscal Policies," *American Economic Review*, Supplement, XXVIII (1938), 90-112; J. M. Clark, "An Appraisal of the Workability of Compensatory Devices," *ibid.*, XXIX (1939), 194-208.

to examine the economic consequences of this program of deficit financing for the United States. For convenience the analysis will be divided into two main sections: (1) an examination of the effects of the spending program upon employment and income; and (2) a consideration of some of the more important effects upon our economy of the large public debt which has accumulated as a result of the spending program.

Effect of the Spending Program upon Employment and Income

Full consideration of the economic effects of deficit financing would involve many issues, only some of which are subject to reasonably satisfactory analysis. Among those issues which are important but which I cannot undertake to consider here are: (1) the extent to which the spending program has involved wasteful expenditure of labor and resources; and (2) the extent to which certain sections of the spending program have added to our ability to produce, and thus have contributed to the increase of national income for future generations.

Examples could easily be given of projects that have been wasteful; and other examples could be given of projects which should contribute in a substantial way to the increase in our national income of the future. It could be pointed out that, so far as the wasteful projects are concerned, much of the labor and resources so wasted would have been wasted anyway had they been left unemployed. And then it could be further pointed out that the waste which has occurred could have been avoided in large part if more attention had been given to long-range planning, if regional political considerations had not played their part, and if the need for immediate results had not been so great. But I must admit that I have no adequate basis for a thorough analysis of these two issues; consequently they will not receive further consideration here.

Attention will be directed in this section exclusively to the more immediate effect which the spending program has had upon the national income, employment, and private investment. How successful, as a recovery measure, has the program been?

First, there can hardly be any question but that the spending program has been in considerable part responsible for the increase in the national income which has occurred since 1933. The successive annual deficits of the federal government since that year have been accompanied by considerably greater annual increases in the national income in every year except 1938. Or, if the more precise and useful comparison is made between annual net "income-increasing" expenditures of the federal government and annual increases in the national income, the same conclusion follows.² It is a temptation to attribute the whole of the increase in the national income to the spending program, and to explain the response of

² Gayer, *op. cit.*, pp. 97-102. Gayer's figures cover the period down to 1937 only.

the former to the latter by reference to the multiplier principle. It would be a mistake, however, to attribute the successive increases in the national income exclusively to the spending program, attractive though that simple explanation may be.

In the first place, if it be assumed for the moment that the greater part of the secondary effects of a given increment of government spending are enjoyed within a year, then the two variables to be compared are not the absolute amount of the net income-increasing expenditures and the increase of the national income, but rather the increase in the amount of government expenditures and the increase in the national income for each year. As Clark has reminded us, the stimulating effect of a given rate of government spending becomes exhausted when the national income has increased to that level at which a rate of saving (or "leakage" of other sorts) has developed equivalent to the given rate of government spending.³ The appropriate multiplier relationship is that between annual increases in net income-increasing expenditures and annual increases in the national income.

Now when the successive annual increases in the amount of government expenditures are compared with the successive annual changes in the national income produced, it immediately becomes evident that in several of these years the increase in the national income was clearly disproportionate to the increase in federal spending. Take for example the year 1935. In this year, according to Gayer's figures,⁴ there was a federal net income-increasing expenditure of 3,154 million dollars; the national income produced in 1935 exceeded that of 1934 by 5,180 millions. But the net federal contribution in 1935 was no greater than it had been in 1934. With no increase in the rate of spending there developed a very substantial increase in the national income.⁵ The conclusion is suggested, certainly, that circumstances other than the spending program had an important part to play in bringing about the increase in the national income in this particular year.

The same conclusion is suggested by an examination of the years 1931-33. In these three years the net federal income-increasing expenditures averaged 1,750 million dollars while the national income steadily declined.⁶ Of course the explanation is obvious: the effect of the spending program in these years was more than offset by the decline that occurred in private

³ J. M. Clark, *op. cit.*, pp. 199-201.

⁴ *Loc. cit.*

⁵ It may be argued that, since the stimulus of a given increment of spending is not limited to the year in which the spending occurs, some of the increase of the national income in 1935 may have been attributable to the increase in the rate of spending that occurred in 1934. This cannot be denied. However, it is highly improbable that such a delayed effect could have been an important circumstance underlying the substantial increase in the national income in 1935.

⁶ Gayer, *loc. cit.*

investment.⁷ This very explanation, however, serves to direct attention to the fact that the variations in the national income during the whole period under consideration must have been related to the variations in private investment as well as to the variations in public spending. And although the rate of private investment has certainly not been unaffected by changes in the rate of public spending, it has surely been affected by other circumstances as well. This clearly must have been true in the years 1931-33; it probably was equally true in the years since 1933.

With this conclusion in mind, take again the year 1935. In this year, it will be recalled, there was an increase of over 5 billion dollars in the national income while the net federal income-increasing expenditures showed no increase over 1934. But at the same time residential construction increased 465 million dollars, business construction 281 millions, the flow of producers' durable commodities 591 millions, and inventories 19 millions as compared with 1934—a total increase in these important elements of private gross investment amounting to 1,356 millions.⁸ It certainly would be unwise to attribute the whole of the increase of the national income to the federal spending program in a year in which there was no increment in the net federal contribution while there did occur a very substantial increment in private gross investment. Surely the same caution should be observed for the years since 1935. If there was a multiplier effect attributable to the government's spending program, there was also a multiplier effect attributable to the successive increments in the rate of private investment. Furthermore, although the rate of private investment has been discouragingly low since 1933, and although it has increased relatively slowly, yet the annual increases in the rate of private investment in some of these years compared quite favorably with the annual increases in the rate of government income-increasing expenditure.

The possible reply that such increase as did occur in the rate of private investment was itself stimulated by the spending program is not convincing. It is certainly not to be denied that the spending program should be given credit for some, possibly much, of the increase in the rate of private investment;⁹ but there is some reason for believing that, even without a large spending program, the rate of private investment would have revived considerably during the years since 1933. As to how much it

⁷ Kuznets' analysis of gross capital formation for these years shows a decline in business inventories, business construction, and the flow of producers' durable goods much more than sufficient to offset the effect upon national income of the net federal income-increasing expenditures. Furthermore, with the exception of producers' durable goods in 1933, each of the items declined in each of the years while net federal income-increasing expenditures, after increasing sharply in 1931, remained nearly stable in the two following years. See Simon Kuznets, "Capital Formation in the United States, 1919-1935," *Capital Formation and Its Elements* (National Industrial Conference Board), p. 35; Gayer, *op. cit.*, p. 107.

⁸ Kuznets, *loc. cit.*

⁹ The view that the spending program actually affected adversely the rate of private investment will be considered below.

would have revived under other circumstances, it is useless to speculate. It is important, however, to stress the necessity for caution in attributing the whole of the increase in the national income to the spending program.

Yet even if it be granted that the increase which has occurred in the national income since 1933 is primarily attributable to the spending program, it must be concluded that the program has failed to produce the results expected of it. For it had been anticipated that the successive federal net contributions would not only increase incomes, the demand for consumers goods, employment in the consumers goods industries, and, somewhat later, private investment and employment in the capital goods industries but also that the rate of private investment would increase sufficiently rapidly and on a sufficiently large scale to make possible the gradual reduction and final elimination of the federal net contributions. In other words, the purpose was to "prime the pump," and then to withdraw, leaving the pump to do the work. But the pump has refused to be primed beyond the point of yielding a rather feeble trickle, and the government has had to continue its income-increasing expenditures on a large scale in order to prevent actual recurrence of a decline in business activity.¹⁰

There are several reasons which have been suggested for the failure of response of private investment. The most fundamental of these, I suspect, is the failure of businessmen to alter their long-term expectations upon the basis of an increase in the demand for consumption goods which they are convinced would continue only so long as government spending also continued.¹¹ A government spending program should favorably affect short-term expectations, at least as long as the program is continued, but unfortunately there is no reason to expect an equally favorable effect upon the long-term expectations of investors.

Second, renewed investment activity on any large scale is unlikely to result from increased consumption when there already exist inventories that are regarded as excessive and adequate plant capacity for considerably increased volume of production of consumers goods. In the three years 1933-35, Kuznets estimates that business inventories declined nearly 4 billion dollars, measured in 1929 prices, or over 2.6 billion dollars, measured in current prices.¹² This represents a very considerable volume of

¹⁰ Even though there were numerous other circumstances involved, the decline in the net federal contribution in 1937 surely had much to do with the recession of 1937-38. For an analysis of the complex of circumstances responsible for this recession, see S. H. Slichter, "The Downturn of 1937," *Review of Economic Statistics*, XX (1938), 79-110. While agreeing with Slichter's thesis that the drop in the federal net contribution in 1937 has been given too important a place in some of the explanations of this recession, I am inclined to attribute somewhat more importance to this circumstance than he does.

¹¹ Cf. J. M. Clark, "Effects of Public Spending on Capital Formation," *Capital Formation and Its Elements* (National Industrial Conference Board), pp. 62-63; P. M. Sweezy, discussion of a paper by A. Kahler, *Social Research*, VI (1939), 230-31; D. T. Smith, "Is Deficit Spending Practical?" *Harvard Business Review*, XVIII (1939-40), 38.

¹² *Op. cit.*, pp. 34-37. During these same three years the net federal income-increasing expenditures totaled only about 8.2 billion dollars. Gayer, *op. cit.*, p. 107.

disinvestment, and indicates something of the slack which needs to be taken up, after consumption demand has increased, before investment is likely to respond.

Third, there should be mentioned the very considerable list of circumstances that have been responsible for the persistent pessimism of long-term expectations. One cannot help but believe that even though the program of deficit financing had tended to make long-term expectations of businessmen more favorable to a renewal of private investment on a large scale, these other dreary aspects of the business situation would have overwhelmed any such tendency. The uncertainty of the international situation, both politically and economically, the clear necessity for a long-period, painful readjustment of the structure of our agricultural industry, the uncertainty as to the future for private operators in the public utility industries, the unsettled and rapidly changing situation in regard to labor relations—all may be mentioned. In addition other more general aspects of the business situation have certainly played their part: First, the conviction on the part of businessmen that the Administration was determined to make political capital by maintaining an attitude hostile to business. Second, the whole aftermath of fear and uncertainty following upon the panic of 1933 has made businessmen cautious, hesitant to launch new and hazardous ventures and unwilling to tie up funds in long-term investments. Third, there has failed to emerge a wide range of opportunities for investment in new industries of promising scope or for profitable expansion of old industries. Altogether it is not surprising that private investment has failed to respond to the stimulus of public spending when long-term expectations have been dominated by such circumstances as these.

The question should be raised at this point, however, whether the failure of private investment to recover satisfactorily may not be attributable to the government's program of deficit financing itself. In support of this contention it may be argued that the program of large public expenditures has served to maintain wage rates and the prices of materials at levels that have discouraged the expansion of private business; that the waste characteristic of many of the projects has sapped business confidence; that the public borrowing of the government necessitated by the program has diverted funds from the private capital market; and that the threat of runaway inflation, of a future heavy burden of taxation, and even of a future breakdown of the federal credit have all served to increase businessmen's uncertainty as to the future and to discourage private investment.

It probably is true that the program of large public expenditures has played some part in creating a situation favorable to the maintenance of wage rates and prices of materials at relatively high levels. But the rise of wage rates is surely more closely related to the policies of the NRA, to later federal legislation with regard to labor, and to the virile and energetic

efforts of organized labor itself, than it is to the size of the federal program of expenditures. The maintenance of prices of materials as well is certainly not unrelated to the influence of the NRA, and to the whole trend of development towards increasing control over price on the part of corporate business enterprise. There certainly has been no lack of funds available for investment in private issues because of the large public issues that have been made. Nor can one discern any clear evidence of the fear of inflation in businessmen's overt behavior, as distinct from their pronouncements, in the period since 1933, except possibly for a brief period in 1937. And the behavior of the government bond market certainly has not been such as to support the argument that private investment has been discouraged by fear of a collapse of government credit.

In a somewhat different category is the claim that the wastefulness characteristic of much of the spending has adversely affected business confidence. Several of the projects selected for development have clearly been ill-advised, and the failure of these particular projects has strongly colored businessmen's judgment of the whole spending program. They have found it correspondingly easy to believe that other projects, although socially justified, have been developed wastefully. Still other expenditures, such as those for relief, have produced no increase in the tangible wealth of the country. In short, it is quite likely that the way in which the money has been spent has had a bearing of some importance on the success of the spending program. How important this circumstance has been it is of course impossible to determine; unfortunately businessmen's own testimony on the matter is not very reliable. But it can hardly be denied that the spending program would have avoided such a possible adverse effect upon private investment if the projects could have been more carefully planned in advance, if less waste had been incurred in carrying them out, and if a greater proportion of the spending had been devoted to projects that would directly or indirectly tend to increase the national income of future years.

It is also possible, though not subject to proof, that the threat of increased taxation in future years, closely connected of course with the size of successive federal deficits, has played some part in adversely affecting long-term expectations. To the extent that this has been true, and to the extent that long-term expectations have been adversely affected by the belief of businessmen that much of the spending has been wasteful, it must be concluded that the spending program itself must share some of the responsibility for the slowness of recovery of private investment. The spending program has been, to some extent at least, self-defeating. But the opinion may be hazarded that this possible adverse effect of the spending program upon private investment has probably been of minor importance as compared with the more formidable list of circumstances recited above:

the fact that businessmen have looked upon the program as temporary in character, and accordingly have refused to revise their pessimistic long-term expectations in the light of the program; the existence, particularly in the early years of the period under consideration, of considerable excess capacity and of large inventories; and, finally, the many seriously adverse circumstances that have persistently justified pessimistic long-term expectations.

The program of deficit financing has failed to produce lasting recovery fundamentally because of the failure of private investment to respond to the stimulus of increased consumption on a sufficient scale to permit gradual reduction of government spending.¹³ Even though the current defense crisis had not developed, we probably should have had to continue the program of deficit financing for some time to come. We had the lion by the tail. With unemployment still at a high level and private investment still in a state of relative stagnation, reduction of expenditures and increase of taxation would have been a dangerous policy indeed.¹⁴

It follows that for some time to come, with the much larger expenditures contemplated under the defense program, continuing federal deficits must be expected. However, the problem is now in several respects a different one. In the first place, the annual net income-increasing expenditures under the defense program are likely to be substantially larger than those involved in the attack upon depression during the period since 1933. Furthermore, for several years at least, the annual increases in these expenditures are likely to be greater. Hence the multiplier effect upon national income and employment should be at least proportionately greater.

In the second place, any tendency which the former spending program has had toward discouraging private investment through adversely affecting business confidence will probably disappear almost completely in the case of the defense program. It is feed for the gristmill of the cynic that a large expenditure program for defense, when there is a strong conviction that such expenditures are imperative, may be expected to have little or no adverse effect upon confidence. The dangers of future inflation, of eventual collapse of the federal credit, of wastefulness, of future burdensome taxation, of higher interest and wage rates and of higher prices of materials may, and probably will, actually be considerably more serious dangers than they were under the more moderate depression spending program. But businessmen, convinced of the supreme necessity for the program, will now pay little attention to these future dangers and threats of future

¹³ The statement that the spending program has failed to produce lasting recovery is not intended to imply the generalization that under *all* circumstances a program of deficit financing must fail to produce lasting recovery. The general question involved unfortunately cannot receive attention here.

¹⁴ Unless, of course, it is wrong to conclude, as I did above, that the policy of deficit financing itself has probably played a minor part in checking the increase of private investment.

burdens. Consequently the increased size of the new program is likely to have its full effect upon the national income and the volume of employment. The pump is more likely to be primed.

In the third place, we have good reason to expect the defense program to be continued on a grand scale for a considerable number of years—perhaps five, perhaps ten, perhaps even longer. Hence one of the principal difficulties which has beset the former deficit-finance program—the fact that the expenditures have been looked upon by businessmen as no more than a temporary stimulus—is now less likely to play a part. With five or ten or even more years of heavy government expenditures upon armaments in prospect, businessmen are more likely to revise their long-term expectations upwards and to be tempted by investment opportunities. Fear of the effects of expected higher taxes, an upward movement of wage and interest rates and in the prices of materials may tend to counteract this tendency somewhat; the development of actual, though moderate, inflation would probably accentuate it.

If it is assumed that a moderate upward movement of the general level of prices is permitted, that interest rates will be kept relatively low, that wage rates are permitted to rise no more than in proportion to the rise in the cost of living, then it would appear probable that the national defense spending program will have in the next few years a very favorable effect upon the size of the national income and the volume of employment. Whether it will affect the standard of living of the American people equally favorably is another question.

Meanwhile the federal debt will probably continue to increase at a fairly rapid rate for some years to come—perhaps even more rapidly than during the past nine years. It is appropriate, therefore, to devote the next section of this paper to an analysis of some of the effects upon our economy of this large and increasing public debt.

The Economic Effects of the Large Public Debt

First it is important to review briefly the well-known proposition that a large public debt represents no direct burden for future generations, since future interest payments and repayments of principal will simply be transfer payments from taxpayer to bondholder.¹⁵ To facilitate exposition, let period I refer to the period during which the extraordinary outlays are being made by government, whether for attack upon depression or for national defense; and let it be assumed that during this period the national debt is steadily increasing. Let period II refer to the period after the ex-

¹⁵ The proposition has been carefully examined by A. C. Pigou, *A Study in Public Finance*, part iii, ch. 1. In the brief review of the doctrine which is presented in this paper the assumption will be made that the debt is entirely domestic. The qualifications to the doctrine which have to be made when part of the debt is owed to foreign investors are well known to economists.

traordinary outlays have ceased, or alternatively have come to be treated as ordinary outlays to be covered by taxation; the national debt is now assumed to be subject to periodic or steady reduction. Then clearly, from the point of view of society as a whole, the true direct burden of the outlays involved in period I is borne in the same period, and cannot be shifted to period II. Assume, for example, that the government makes outlays in period I from borrowed funds for the development of a public works project. Then the real cost of the project consists of the labor and other resources used for construction of the project, and this real cost can be borne only in period I, the construction period. Later, in period II, when receipts from taxation are employed to repay the bondholders, there occurs a transfer of disposable funds from taxpayers to bondholders; but this transaction can have no direct effect upon the total income for period II. The true direct burden remains upon the income for period I, in the sense that if the public works project had not been developed the labor and other resources could have been employed in other ways.

Of course, even in period I, the extraordinary outlays do not constitute a burden proportionate to the outlays involved when the economy is characterized by extensive underemployment of productive resources. Unemployed plant capacity and laborers are used instead of being permitted to go to waste. There are costs involved, of course, but in a sense many of these costs are "sunk" costs from the point of view of society.¹⁶ Any public works or armaments produced with resources and men that otherwise would have been unemployed and thus lost to society are a net gain.

All of the discussion thus far has referred to the direct burden of the outlays and of the debt thereby incurred. But clearly there is also an indirect burden of the debt to be considered. For example, although it certainly is true that interest and principal payments in period II involve simply transfer payments from taxpayers to bondholders, so far as the direct effect of reduction of the public debt is concerned, there may be an indirect effect of these transactions upon the size of the national income in period II, upon its distribution, and upon other aspects of the economy as well. It is this indirect effect which we usually have in mind when we refer to the heavy and oppressive burden of a large public debt.

For the purpose of analysis this indirect effect of the public debt upon the economy has a number of different aspects, each of which will be considered in turn: (1) the effect upon the distribution of income; (2) the effect upon the size of the national income; (3) the effect upon federal fiscal policy; (4) the effect upon the general level of prices; (5) the effect upon the banking system and the efficacy of techniques of credit control.

1. *The Effect upon the Distribution of Income.* Consider first the case of

¹⁶ From the social point of view, marginal user cost is very low. Cf., J. M. Keynes, *The General Theory of Employment, Interest and Money*, pp. 69-73.

deficit financing in period I for the purpose of increasing income and employment during a severe depression. In this case there is little or no burden borne by those who purchase the government securities. Funds are not diverted from private investment or from consumption expenditures. If the purchases of securities are made by the banking system, there is not for this reason likely to be a corresponding contraction of other forms of bank credit.¹⁷ If the purchases are made by individuals, the only sacrifice involved on their part, in most cases, is that of a very slight degree of liquidity, since most such purchases in time of depression are probably made from funds that would otherwise lie idle.

In period II, presumably a period of prosperity, reduction of the debt will involve a transfer of funds from taxpayers to security holders. Is it not possible that these transactions also may constitute no real burden—in this case, for the taxpayers? May not the spending program in period I result in such an increase in the national income in period II that the debt can be serviced and paid off without any increase in tax rates? Unfortunately no such neat and optimistic prediction can be soundly advanced. Once the deficit financing has come to an end the size of the national income (period II) will depend upon such circumstances as the marginal efficiency of capital, the structures of wage and interest rates, and the marginal propensity to consume in period II. If the expenditures of period I were qualitatively of a sort to increase the productivity of the economy, then this circumstance may contribute something to the size of the national income in period II. But in general all that can be predicted is that the national income probably will be larger in the latter period than in the former.¹⁸ Probably tax rates will have to be increased in order to repay the debt.

In addition it should be noted that the security holders will be found mainly in the upper income groups and among the banking institutions. Consequently the additional taxation, even though it is highly progressive, will probably rest upon the lower income groups much more than in proportion to their holdings of government securities. For as Pigou has said, "... experience has never yet revealed a tax system graduated for increasing incomes anything like as steeply as loan subscriptions are likely to be graduated, at all events when the loan required is large."¹⁹ Hence reduction of the debt in period II will involve transfer payments from the lower income groups to the upper income groups and to the banks.

¹⁷ In the discussion which follows the assumption will be made that the expansion of credit arising out of large purchases of bonds by the banking system does not give rise to an inflationary rise in the general level of prices in period I. As long as there is considerable unemployment of labor and other resources this assumption is probably safe enough.

¹⁸ This almost follows from the definitions of the two periods. Presumably if the national income were not larger in period II than in period I repayment of the debt would not be undertaken.

¹⁹ *Op. cit.*, p. 242.

But one must avoid the careless inference that debt repayment therefore of necessity involves a change in the distribution of income in favor of the upper income groups. It is true that the disposable income of the lower income groups will be reduced by the transfer payments; but it is also true that the disposable income of the upper income groups will similarly be reduced by taxation. Although the latter are money in pocket, having as a class received in cash for their securities much more than they have paid out in increased taxes, it does not follow that they have come off better than the lower income groups. Unless former security holders in the upper income groups look with equanimity upon impairment of their capital they cannot properly regard the cash received through redemption of their securities as an addition to disposable income.

Hence the process of repayment of debt does not in itself affect the distribution of income. The latter may be affected, however, by the nature of the additional taxation imposed for the purpose. For example, if the additional taxes make the tax system as a whole more progressive than it had been in period I, then this change may have an effect upon the distribution of income in period II. Disposable income must be lower in period II than it would have been if the debt had not been reduced. How much lower it will be in different income groups as compared with one another will depend upon the nature of the tax system in period II.²⁰

Although the process of repayment of the debt does not in itself affect the distribution of income, payment of interest on the debt in period II does have such an effect. Interest payments, like debt repayments, involve transfers of funds from the lower income groups to the upper income groups; but in the case of interest payments the outcome is not only a decrease in disposable income for the lower income groups but also an increase in disposable income for the upper income groups. Hence, since the additional taxation imposed is almost certain to rest upon the lower income groups more than in proportion to their holdings of government securities, transfer payments for interest on the indebtedness will tend to shift the distribution of income in favor of the upper income groups.²¹

Consider next the case of extraordinary expenditures in connection with an emergency national defense program. In contrast to the preceding case

²⁰ S. E. Leland suggests that the length of the period of repayment will have an important bearing upon the nature of the tax system in period II: "The longer the period the less likely is it that the debt will be paid by progressive taxation and the less steep is the progression likely to be." See his "Debt Retirement and the Budget," *American Economic Review*, Supplement, XXVII (1937), 81. Alzada Comstock was of the opinion in 1937 that an attempt to reduce the public debt would involve the levy of additional taxation that would rest largely on the lower and middle classes. "The Effects of a Federal Tax Program That Will Be Adequate for Substantial Debt Reduction," *Proceedings of the Thirtieth Annual Conference on Taxation under the Auspices of the National Tax Association* (1938), p. 386.

²¹ If taxes should be increased in period I in order to meet increasing interest payments on the growing public debt, the same distributional effect would be operative in this period as well.

of deficit financing in time of depression, the national defense program may be financed either by borrowing or by increased taxation imposed contemporaneously with the increased expenditures, or of course by a combination of the two methods.²² If the method of heavy taxation is employed, the effects of the program upon the distribution of disposable income will of course depend upon the nature of the increased taxation imposed. If the expenditures are large in any one year, the additional taxation, Pigou suggests, must be highly progressive, since the amounts required must be obtained in one way or another from the wealthy.²³ Hence the upper income groups are likely to be required to meet a greater proportion of the cost of the emergency defense program than they have been accustomed to meeting in the case of ordinary government expenditures. The distribution of disposable income may thus be altered in favor of the lower income groups during the period of the emergency expenditures when the annual amounts involved are large.

Pigou, however, clearly has in mind the case in which the lower income groups have little or no available margin upon which the government may draw. In a country in which the lower income groups do have some margin, the nature of the additional taxation imposed in time of emergency may be such that the whole system of taxation becomes less progressive than before.²⁴ For example, it may be regarded as important to prevent the increased taxation from discouraging productive activity, or it may be desired to obtain the maximum revenue. In either event the outcome from the point of view of distribution of income may be the reverse of that predicted by Pigou. The distribution of disposable income may be altered in favor of the upper income groups.

However, if part or all of the emergency expenditures are met by borrowing, the distribution of disposable income is almost certain to be altered in favor of the lower income groups.²⁵ The purchaser of bonds looks upon his outlay as an investment, and although he has good reason to look forward to an increase in his burden of taxes in period II he has no expectation that this future increase in taxes will be in proportion to his holdings of bonds. Hence, if he has a large income, his contribution through the purchase of bonds in period I is likely to be considerably larger than it would be if the necessary funds were raised exclusively through the levy of increased taxation. Conversely the lower income groups are called upon

²² Cf. Pigou, *op. cit.*, pp. 242-246. The analysis immediately following owes much to Pigou's presentation of the matter.

²³ *Op. cit.*, p. 243.

²⁴ I am indebted to my colleague, E. D. Fagan, for the suggestion.

²⁵ Again the assumption is made that the purchases of bonds by the banking system in period I do not give rise to an inflationary rise in the general level of prices. In the case here considered, however, inflation may easily develop if borrowing is continued after full employment is approached and if bank credit expands in connection with the borrowing operations. In that event the well-known distributional effects of inflation will complicate the effects upon distribution to which attention is given in the text.

to make somewhat less of a sacrifice of disposable income in period I when the funds required are raised wholly or in part through borrowing than would be the case if the funds were raised through increased taxation exclusively.

The situation which develops in period II when the time comes to reduce the debt is precisely the same when the borrowing of period I was connected with an emergency defense program as when the borrowing was connected with a deficit finance program in time of depression; there is no occasion to repeat the analysis. In a sense the method of borrowing in period I makes it possible for those who constitute the lower income groups in period I to shift part of the burden of the outlays to those who will constitute the lower income groups in period II. The upper income groups finance the arrangement. Both interest payments and repayment of the debt will involve transfer payments from the lower income groups to the upper income groups in period II. So far as interest payments are concerned, since the additional taxation imposed is almost certain to rest upon the lower income groups more than in proportion to their holdings of securities, there will be a tendency for the distribution of disposable income to be shifted in favor of the upper income groups. In the case of repayment of the debt, the effect upon the distribution of disposable income will depend upon the degree of progression characteristic of the additional taxation imposed.

There are two other considerations to be mentioned, however. First, the payments to be made for service and liquidation of the debt in period II may extend over a longer period than the period of extraordinary expenditures. Hence the burden of transfer payments on the lower income groups in period II may be very much more bearable in any one year than would have been the burden of taxation for these same groups in period I if the program of expenditures had been financed exclusively by taxation.

Second, the national income may be larger or smaller in period II than in period I.²⁶ If it is larger, the burden on the lower income groups will be still more bearable.

In general it appears permissible to conclude that the accumulation of a large public debt will tend to affect the distribution of disposable income in the following ways: In the case of an emergency defense program which involves large expenditures the method of borrowing in period I permits the lower income groups to shift part of the burden to the lower income groups of period II. Therefore the distribution of disposable income in period I may be altered somewhat in favor of the lower income classes as compared with what it would have been if the method of taxation had been exclusively employed. But on the other hand interest payments on the growing debt in period I will tend to alter the distribution of disposable income in favor of the upper income groups. In period

²⁶ In the case of the emergency defense program.

II interest payments will tend to operate in the same way, regardless of whether the debt has arisen as a result of depression spending or as a result of an emergency defense program. As distinct from interest payments, the process of repaying the debt does not in itself affect the distribution of income in period II; whether one income class is affected less favorably than another will depend upon the nature of the additional taxation imposed.

2. *The Effect upon the Size of the National Income.* The effect upon the size of the national income of a government spending program has already been considered. The purpose now is to take up the effect upon the size of the national income of payments for interest on, or for the reduction of, the public debt. These payments, as has been pointed out, involve, in the main, transfers of disposable income from lower income groups to upper income groups, banks, insurance companies and similar investment institutions. These transfer payments in turn are likely to affect: (a) the propensity to consume; (b) the supply of funds for investment, and possibly also the rate of interest; (c) the marginal efficiency of capital. Through these variables the size of the national income will be affected.

In so far as there is a transfer of disposable income from the lower income groups to the upper income groups there is likely to occur some reduction in the propensity to consume. For since the marginal propensity to consume is higher for the lower income groups than it is for the upper income groups, the increased taxes paid by those with small incomes are likely primarily to affect their consumption. On the other hand, the interest payments received by security holders in the upper income groups are more likely to be saved than to be spent, and payments received in liquidation of their security holdings are almost certain to be saved and reinvested.²⁷

The counterpart of the tendency toward a decrease in the rate of consumption is in general a tendency toward an increase in the funds available for reinvestment, particularly as the public debt is reduced. Individuals and insurance companies whose government securities are redeemed will now be in the market for other forms of investment opportunity and the supply of funds in the investment market will be increased. In the case of redemption of securities held by commercial banks, the immediate effect will be a reduction of deposits and an increase in reserve ratios. If there were already excess reserves, the net effect will be a reduction of outstanding bank credit; but if there were a demand for loanable funds or if the private securities market were attractive to the banks, there might simply occur a shift of bank funds from government securities to private securities and loans with no reduction of outstanding bank credit.

The reduction in the government bond holdings of Federal reserve

²⁷ Cf. Pigou, *op. cit.*, p. 82, n.

banks, however, will have a somewhat different effect. Member bank deposits, reserves, and reserve ratios will be reduced, and consequently the net effect in this case is more likely to be deflationary. If, however, there are already excess reserves, there need not occur a net contraction of bank credit. Of course Federal reserve policy can at the same time be so directed as either to accentuate or offset any deflationary tendency.

The net outcome with respect to the supply of investment funds would depend, of course, upon the relative amounts of securities redeemed for individuals, insurance companies, and commercial banks, on the one hand, and the Federal reserve banks on the other hand, with Federal reserve credit policy also to be considered. Since Federal reserve holdings of government securities are ordinarily a very small fraction of the total public debt, it would appear probable that the process of debt reduction would increase the supply of funds seeking investment and tend to lower the rate of interest.

The marginal efficiency of capital is also likely to be affected by both interest payments on the debt and the process of reduction of the debt. First, there is likely to be a favorable effect upon the long-term expectations of businessmen and investors when the public debt becomes stabilized or begins to decrease. In so far as long-term expectations had been at all adversely affected in period I by fears of inflation or of eventual collapse of the public credit, there should be an opposite, favorable effect upon expectations in period II.

On the other hand, the decrease in government spending, particularly if it has occurred rather suddenly, may have an adverse effect upon long-term expectations. This is a rather unlikely development since, it will be recalled, the spending program only under certain circumstances is likely to have favorably affected long-term as distinct from short-term expectations in period I.

More important is the possible effect of increased rates of taxation made necessary by either the necessity of meeting interest payments or the desirability of reducing the debt, or both. Of course it is possible that the national income may be sufficiently greater in period II than it had been in period I to permit payment of interest and gradual liquidation of the debt without any increase in tax rates. But if increased tax rates are imposed they may adversely affect the marginal efficiency of capital. Much depends upon the kinds of taxes employed, the exemptions allowed, and the degree of progression characteristic of the system. There is much work to be done by experts in taxation in designing the necessary changes in our tax system so that substantially increased revenue may be obtained with the minimum of adverse effect upon the marginal efficiency of capital.²⁸

²⁸ S. E. Leland, "Debt Retirement and the Budget," *American Economic Review*, Supplement, XXVII (1937), 75-85. Leland offers numerous suggestions for improvement of our revenue system with the above considerations in mind.

When all of these circumstances affecting the size of the national income are taken into consideration there appears some probability that large interest payments or payments in reduction of the debt are likely on balance to tend to affect adversely the size of the national income. A reduction in the propensity to consume will tend, at least in the short period, to reduce the demand for consumption goods and to affect businessmen's expectations adversely in certain sectors of the economy. At the same time, unless the tax system is very skillfully designed, the heavy burden of taxation may adversely affect the marginal efficiency of capital and discourage new investment. If at the same time ease of credit conditions and an increase in the supply of funds seeking investment lead to some decline in the structure of interest rates, the effect upon investment of a decline in the marginal efficiency of capital may be somewhat offset. However, the possibility appears very real that the net effect upon the national income may be depressing.²⁹

3. *The Effect upon Federal Fiscal Policy.* The policy of incurring successive federal deficits during a period of severe depression should have as its counterpart the reduction of the public debt during the succeeding period of prosperity. When, however, the depression is prolonged, the limits to the increase of the public debt may be reached before the depression has come to an end. Or if this danger is avoided, it is possible that the succeeding period of prosperity may be too short or tax rates may not be raised sufficiently to permit reduction of the public debt to a low level again before the next period of depression necessitates further deficit financing. The outcome would be a steady increase of the public debt over the period of several business cycles until finally the public credit might become seriously strained. One of the indirect burdens of a large public debt consists, then, in the limitation which it may come to constitute on the scope of future fiscal policy. Eventually, a severe depression or a national defense emergency may find the federal government handicapped in meeting the crisis by an imminent limitation on its borrowing power.

The size which the public debt may reach before this danger becomes serious cannot be precisely defined. However, the more important elements which bear upon the matter can be stated. Some of these have already been considered above. First, there is the necessity of increased taxation as the debt increases; for if confidence in the public credit is to be maintained, tax revenue should be increased at least in proportion to increased interest

²⁹ But in any given period the effect of interest payments and payments in reduction of the debt on the variables considered above may be overshadowed by other circumstances affecting the propensity to consume, the supply of funds seeking investment, the rate of interest, and the marginal efficiency of capital. It is worth noting, for example, that debt reduction in England in the twenties probably held down the size of the national income somewhat in that period, while in the United States the reverse was probably true. See U. K. Hicks, *The Finance of British Government, 1920-1936*, pp. 340-342; J. M. Clark, *Strategic Factors in Business Cycles*, p. 99.

cost on the debt. If at the same time that the debt increases the national income also increases, then the necessary increase in tax rates will be less than otherwise. But with every increase in tax rates there is the danger that the marginal efficiency of capital and the propensity to consume will be adversely affected, and that consequently the increase in the national income may be checked. The public debt may eventually become so large that a further increase in tax rates may decrease tax revenues by decreasing the national income.³⁰

Much of course depends upon the nature of the tax system. Consequently it is not possible to set down the maximum ratio of the public debt to the national income upon the basis of an analysis of the maximum percentage of the national income that may be raised through taxation.³¹ It is clear, however, that the upper limit of the public debt is related to (a) the size of the national income which can be attained with approximately full employment, and (b) the nature of the tax system, with particular reference to its effects upon the marginal efficiency of capital and the propensity to consume.

A further consideration, of course, is the rate of interest which the government must pay upon its indebtedness; the higher this interest rate the greater is the burden of the debt. A closely related difficulty is that of a rising rate of interest. For if, as the government makes successive issues, it must offer more and more attractive terms, the prices of earlier long-term issues are likely to decline. This development in turn is likely to have a bad effect upon the public's reception of the successive issues.

This difficulty suggests one further circumstance that has a bearing upon the problem: the intangible but important matter of public confidence in the government's ability to pay interest and eventually to reduce the debt, in the purposes for which the money is being spent, and in the government's ability to avoid an extreme inflation of prices.

Fortunately we began the depression in 1929 with a very small national debt, and as this debt has increased we have been able to keep the indirect burden of the debt relatively low through the maintenance of low rates of interest. It would be unwise, however, to continue to count on equally low rates of interest as production expands under the national defense

³⁰ "But it is extremely difficult to give any precise meaning to the concept of the limit of taxable capacity, except in the sense that powerful classes in the community may be unwilling to have particular taxes raised beyond a certain point and consequently withdraw factors of production under their control. It might perhaps be conceded that the limit has been overreached if it could be shown that the national income had been damaged as a result of revenue demands. Well-authenticated long-period examples of this are not unknown to history." U. K. Hicks, *op. cit.*, p. 232.

³¹ However, Studenski ventures to state an outside limit: "It is very doubtful whether it is politically feasible for any national government to finance interest charges in excess of 15 per cent of the national income. . . . At a ratio of this sort the debt itself would be two and one-half to three times the size of the national income." P. Studenski, "The Limits to Possible Debt Burdens—Federal, State, and Local," *American Economic Review*, Supplement, XXVII (1937), 69.

program. Certainly it would be wise, as the defense program proceeds and as employment increases, to raise tax rates substantially, at the same time making such changes in the tax system as will minimize possible adverse effects of increased tax rates upon the expansion of production. As full employment is approached, tax rates should be raised to the maximum consistent with the maintenance of the maximum rate of production activity. Even though we may have no present reason to fear collapse of the public credit, if the present emergency should be followed by war, we should need to have our public credit position as strong as possible.

4. *The Effect upon the General Level of Prices.* The fear that the program of deficit financing during the depression would lead to a rapid, inflationary rise in the general level of prices was unjustified so long as a considerable proportion of these public expenditures served simply to finance a more orderly process of liquidation of private debts, and so long as there existed so much underemployment of men and resources. The real danger from such a program comes after recovery is well under way, from the potentiality for expansion of credit which exists in the form of excess reserves created during the preceding period of depression.³²

With the immediate prospect of still larger public expenditures in connection with the national defense program, the possibility of a considerable rise in the general level of prices becomes greater. We are of course a long way from full employment, and so long as that is the case prices are not likely to rise greatly. Even so, if the defense program continues to expand, some rise of prices even in the present situation of employment is likely to occur. As we learned in 1937, there are so many individual prices which are subject to a considerable degree of control that even a mild expansion of production activity may well bring with it a corresponding upward movement of prices. This possibility is accentuated by the present relatively strong position of the labor movement. The upward movement is likely to be moderate, it is true, as long as so much unemployment of men and resources exists; but the development of bottlenecks in the defense industries may well quicken the movement.

If the national defense program comes to involve very large expenditures, as now appears quite likely, or if this country should be drawn into war, the danger of a rapid rise in the general level of prices will be greatly increased. With the existing excess reserves of the banking system and the potentiality that exists for an expansion of these reserves, the effective exercise of all the available means of credit control together with further increases of tax rates will be necessary to prevent an inflationary rise of prices as full employment is approached.

5. *The Effect upon the Banking System and the Efficacy of Techniques*

³² It is recognized that present excess reserves are to a very considerable extent attributable to the extraordinary inflow of gold which has occurred in recent years.

of Credit Control. It is well known that a substantial proportion of the increase in federal securities since 1930 has been absorbed by the banking system, and the danger in this situation is generally well appreciated. The danger is twofold: a possible danger to the solvency of those banks heavily invested in governments, and a danger to the efficacy of credit control by the Federal reserve.

The danger to the solvency of the banks arises out of the possibility of a rise in interest rates and a fall in the prices of government bonds as business activity expands or as restrictive control upon further expansion of credit comes to be exercised in such a way as to raise interest rates. The danger is easily exaggerated, since it is probable that the banks have prepared for such a contingency by setting up appropriate reserves and by so distributing their maturities as to be able to avoid selling their governments in the market except in case of extraordinary emergency.³³ Of course if business activity expands rapidly under the stimulus of the defense program, the banks may find it worth their while to unload some of their governments in order to free funds for investment in more attractive opportunities. But if they were to do so, obviously the alternative investment would be sufficiently attractive to warrant the loss that would be taken on the sale of governments. Furthermore, as long as excess reserves are as ample as they are likely to be for some time to come, the banks could both hold their governments to maturity and invest funds in the newly developing opportunities.

The danger to the efficacy of credit control appears more real. For even though the central banking system does not need to fear the effect of a rise in the rate of interest upon the solvency of the banking system, there may be political considerations that would lead control authorities to hesitate to take steps that might result in lower prices for government bonds. Such a move would be highly unpopular with banks, insurance companies, corporations, and individuals that have become heavy investors in governments, and would be disturbing to public confidence in the government's credit. Hence one real danger of the present large public debt lies in the possible limiting effect that it may have upon the exercise of those instruments of credit control that might have the effect of raising the rate of interest.

6. *Conclusions as to Policy.* The preceding analysis of the indirect effects upon the economy of a large public debt yields certain suggestions with respect to policy in the present emergency:

a) The method of further governmental borrowing as a partial means of financing the national defense program has some justification as a means of lightening, for the time being at least, the burden of the program upon

³³ It should also be noted that many of the securities held by banks are short-term maturities the value of which would be relatively slightly affected by a rise in interest rates.

the lower income groups. But as full employment is approached and the danger of an inflationary rise of prices becomes real, every precaution should be taken to prevent the further purchase of government securities by the banks, or by individuals with funds borrowed from the banks.

b) As the public debt increases, tax rates should also be increased; and as full employment is approached the revenue from taxes should assume a much larger proportion of the cost of the defense program. In an emergency such as this there is much to be said for a tax system that is highly progressive. For as Pigou has said, ". . . there is a general feeling that, in a pre-eminent national emergency, the call from each should be for his *utmost* rather than for his *share*."³⁴ But full consideration must also be given to the necessity of obtaining the maximum revenue without checking the increase of the national income, and without adversely affecting the marginal efficiency of capital, particularly in the defense industries.

c) If the national defense program comes to involve as large annual expenditures as now appear likely, measures may need to be taken, in addition to the increase of tax rates and the restriction upon the expansion of bank credit in connection with the purchase of government security issues, to prevent an inflationary rise in the general level of prices. Existing instruments of credit control should of course be used to prevent an excessive expansion of credit. But if the familiar instruments prove inadequate or if the use of some of these measures is made difficult because of the political consequences that might follow upon a decline of government security prices, then resort should be had to a rigorous rationing of credit, control of the private investment market, and, if necessary, direct regulation of the prices of key commodities, wage rates, and even the rationing of consumers goods.

³⁴ *Op. cit.*, p. 246. Italics in original.

ECONOMIC CONSEQUENCES OF DEFICIT FINANCING: A REVIEW

By DAN THROOP SMITH

Twenty years ago we had reached fairly general agreement on the dangers and evils of inflationary wartime deficits. During the decade following World War I, virtually all discussions of deficits were concerned with analyses of war and post-war inflations. The extensive development of theories and criticisms of depression deficits has taken place in the past two years. This was a time when, as Professor Williams has pointed out, many of the theories of central bank control built up in the twenties were found to be altogether inadequate. The agreement among economists as to the results of war deficits is clearly not matched by any similar agreement as to the results of depression deficits. Professors Williams and Haley have presented admirable papers tracing the development of arguments with reference to deficit spending and have indicated the probable and the possible economic consequences of government deficits. In an elaboration of certain points raised by them, particular attention will be given to the effects of taxation, viewed either as an ultimate consequence or as an immediate alternative to deficit financing. Because of its immediate importance, first consideration should be given to the proper role of borrowing in this country at the present time.

Defense Deficits. The circumstances in which our current defense deficit arises are not exactly similar either to the conditions attending our recent depression deficits or to those accompanying the war deficits of a generation ago. We now have a very considerable body of unemployed resources, human and material; in that respect our position is similar to that of most of the past decade. But our present spending program differs from that of the past several years in that we are spending now because we want the defense equipment and forces which can be secured only by spending. Instead of starting with a decision to spend on something in order to create a desired deficit and then looking around for an appropriate object of expenditure, we now start with the object and then find out how much we must pay to achieve the desired result. Spending and a deficit are now the incidental results and not the primary objectives. Formerly one opposing deficits did no more than object to expenditures of doubtful net benefit. Now anyone concerned by the deficits must positively advocate taxes, which are admitted to have certain disadvantages. The taxes can be preferred only if they lead to the lesser evil.

Our major fiscal policy decisions will be concerned with the methods of financing the necessary defense expenditures in an attempt to get the best possible balance among the different forms of borrowing and the various types of taxation. At the present our major concern must be to maximize the defense effort, to minimize the reduction in the general standard of living as measured by private consumption of goods (or if possible to increase the standard of living), and to leave the country's business and financial structure in as satisfactory a state as possible after the defense emergency.

Our current situation is believed by many to be an interim period between one

with much less than full employment of our economic resources and one in which such full employment is highly probable. Those who have advocated deficits either as recovery devices or as stagnation offsets will consistently contend that the upward momentum of such a transition period should not be impeded by any new taxes which might curtail consumption and thus partially offset the expansionary influence of the deficit. Before accepting this proposition we must ask ourselves whether the implied major objective—full employment of resources and maximum national output—may not be secured only at too high a cost. Let us first inquire as to the importance of the objective of maximum national output. We are convinced rightly that effective defense requires a maximum output of defense goods. But this does not necessarily mean that effective defense requires a maximum output of everything. This distinction is important.

Since we start our defense program from a position far short of full utilization of our aggregate resources, it should be possible to get some or all of the required goods from increased rather than diverted activity. If the defense needs are accepted as a given absolute amount, the larger the national income the smaller the proportionate apparent burden.

The acquisition of defense goods is primarily a production problem. The government and business management must act to secure speed in agreeing on the design and quantity of specific items, speed in finding or building the necessary plant and equipment, speed in getting adequate labor forces at the right places: these are the vital problems in defense and they will not be solved by any fiscal policy. In a real emergency funds will be provided in one way or another. The material required will be produced on specific order—it will not be automatically exuded as a by-product of an expanding general production. To a large extent, then, defense production is independent of the fiscal policy of the government, except in so far as the fiscal policy may bear indirectly upon plant construction and upon the efforts of labor and management in defense industries. Fiscal policy will influence the general level of output and, with defense requirements more or less determined in absolute amount, variations in total output will be reflected largely in the quantity of civilian goods produced.

It is important to recognize that immediate increases in taxation, even in taxes which will curtail consumption and restrict aggregate material output, may increase rather than decrease the effectiveness of the defense effort. It is clear that priorities, formal and informal, will be increasingly necessary if our defense program develops adequate speed. The process of establishing a system of rationing or priorities takes time and produces a certain amount of disturbance. If the bottlenecks are relieved by taxation of consumers' incomes, the difficulties of reorienting our productive efforts may be diminished. It is impossible, however, to appraise accurately the effects of expansionary finance without further investigation of its probable results in terms of increased quantities of specific products and of shifts upwards in price lines and qualities of products. Only on the basis of estimates of the nature of changes in demand can we interpret demand increases in terms of burdens on specific factors of production.

When one turns to the postemergency situation, it also seems likely that too great an emphasis on maximum aggregate production in the defense period may

have unfortunate repercussions. Unrestricted civilian demands added to the required defense demands for the products of certain industries may lead to undesirable overexpansion of capacity, giving the next generation a heritage of unstable competitive structures and ghost communities. An accentuation of the postemergency depression may be part of the price we pay for maximum civilian consumption during the emergency. Here again, we should try to anticipate the probable results of expansion of capacity in terms of such things as effects on cost and price structures, relative competitive positions, elasticity of civilian demands, and adaptability to civilian activities of new skills and equipments needed for defense. Our concentration on a desirable over-all result through fiscal policy may distract our attention from significant and undesirable developments in the economic system.

Professor Haley has given several reasons for believing that we may expect to have a somewhat greater and more rapid expansion of total output during the period of defense deficits than we had during the period of depression deficits. Subject to the foregoing qualifications, the expansion is most desirable as a means of minimizing our sacrifices for defense and avoiding the social costs of idleness. It is to be hoped, however, that tax increases will not be deferred in a desire to secure the greatest possible expansionary effect of the deficit. The current proposals in Washington for tax increases are encouraging. The relative merits of different types of taxation as alternatives to further borrowing will be mentioned after a brief consideration of war deficits.

War Deficits. It has already been noted that in World War I, after approximately full employment of available resources had been reached, it came to be generally agreed that further government borrowing and spending of newly created funds led to an inflationary price rise, rationing and priorities, a rapidly expanding debt, an accentuated war boom with an increase of postwar adjustment problems and an inequitable and unintended distribution of the real burden of war expenditures. It is needless to review here the various inflations as they developed during World War I and during most of the large-scale conflicts of the two preceding centuries. The basic economic fact was that governments were spending funds which they themselves created, directly or indirectly. This meant a net increase in total spending and, with the productive system already operating at its effective capacity, an increasing flow of money coming against the limited flow of goods inevitably started the inflationary spiral. The actual sequence of events varied at different times and places and depended among other things on the psychology of the people, the structure and customs of business, and the emergency policies adopted by the government.

Our war and postwar experiences were responsible for the popular fear of the immediate consequences of any deficits. The failure of many people to distinguish between the effects of deficits during full employment of resources and during periods with substantial slack in the system was responsible for many of the extravagant assertions made between 1931 and 1935 about the immediately catastrophic results of deficits. But though we were perhaps unduly concerned about deficits in the first part of the last decade we must not allow our recent experience to make us unduly unconcerned about the effects of expansionary deficits during full employment. Fortunately, all economists, regardless of their

views on depression deficits, apparently agree on the desirability of limiting expansionary borrowing during full employment, and we can hope that in practice all possible efforts will be made to secure funds from other sources.

The alternatives to inflationary borrowing in war finance are three: reduction in expenditures, non-inflationary borrowing, and taxation. (In no instance will a direct resort to the printing press be considered as an alternative to inflationary borrowing, since it is seldom advocated and is properly regarded as less satisfactory than inflationary borrowing when an expansionary influence is desired, and as worse than inflationary borrowing when a limitation on monetary expansion is desired.) During a war or an emergency defense period, a reduction in expenditures for military activities is clearly not compatible with the national interest. This does not preclude the possibility of reduction in other expenditures, especially if the period of military emergency follows one when large-scale spending has been undertaken as a fiscal policy. Conspicuously, in this country, unnecessary public works should be postponed and large reductions in relief should be possible. Economy moves should not be permitted to impede defense activities where time is essential, but increased efficiency may be developed by the elimination of bureaus which have become sufficiently well entrenched to resist ordinary economy moves. Efficiency rather than economy should be the keynote, but economies should not be overlooked. Recent moves by the Administration in Washington to curtail nondefense expenditures are most welcome.

In non-inflationary borrowing the government borrows funds that would otherwise be spent privately on something, either consumers or capital goods. Thus from a monetary standpoint equilibrium is maintained. To the extent that the government spends more, the private economy will spend less. Non-inflationary borrowing involves neither an increase nor a decrease in total spending due to fiscal policy. Inflationary borrowing, on the other hand, involves government use of funds that would otherwise be nonexistent or unspent. But an enthusiasm for monetary stability should not blind us to the probability that even non-inflationary borrowing will produce serious disturbances in the economic structure when large-scale government expenditures require rapid changes in production. Spending will be decreased for the products of some industries and increased for the products of others. If productive factors are not readily transferable, depression will develop in some fields while bottlenecks will lead to price increases or rationing in others.

Non-inflationary borrowing is best epitomized by the slogan "save and buy" during a government loan campaign, while inflationary borrowing is the inevitable result of "borrow and buy." To make non-inflationary borrowing possible there must be adequate savings, and these savings must be tapped by government loans. Our analyses of government finance during World War I provide us with much useful information concerning the efficiency of various devices to increase total savings, to restrict private uses of savings to those which are essential to the defense effort, and to make certain that the government secures the full use on a more or less voluntary basis of all savings which are not essential to private industry in its defense activities. These devices included among others patriotic appeals to save, forced curtailment of certain types of

private expenditure, the capital issues committees, the development of new types of securities to reach new categories of savers and investors, and the introduction of high-pressure sales campaigns for government securities.

A much more extreme form of non-inflationary borrowing was proposed last year by Keynes. The "deferred pay" plan literally involves forced savings. In analyzing the resources of the United Kingdom, Keynes determined that voluntary savings combined with any tax levies which were at all likely to be imposed would still fall far short of providing the government with the necessary funds for the conduct of the war. Inflationary borrowing was thus indicated. To avoid it, the plan calls for a transfer to the government of a portion of incomes at progressive rates. But instead of treating these payments as taxes, non-transferable credit balances would be set up for a part of the original payment. The proportion of each payment to be treated as a credit balance would vary inversely with the size of the income. The release of the credit balances in the postwar depression in amounts and at times best suited to offset deflation would be a new factor in fiscal policy. The plan further proposes a capital levy to provide funds to make the payments on the released credit balance. Since the best time for such a levy would be in the flush of a postwar boom, if any, and not in the depths of a postwar depression, the levy would precede the release of deferred pay. The proceeds of the levy could be used to retire floating debt which could be later expanded to secure funds as needed for payments on the credit balances.

This plan has many attractive features. It suggests a way to avoid inflationary borrowing. It reveals the true nature of the immediate war burden and indicates its first distribution. It has all of the advantages of finance by direct taxation except one: it leaves a country with a debt which makes necessary the imposition of additional postwar taxes. One is therefore impelled to ask, if deferment of pay is feasible, why is not direct taxation to the same extent feasible? Direct taxation would also avoid inflationary finance and reveal the extent and nature of the immediate war burden. In addition, it would leave the postwar period with a lower debt burden.

There are at least three alleged advantages of the deferred pay plan over comparable direct taxation in war finance. It may be claimed that it is more equitable in that the immediate wartime burdens on the lower income groups will be offset in part by postwar transfer payments from the higher income groups. This assumes that postwar taxation on the upper income groups would be higher because of the payments due under the deferred pay plan. This seems a highly questionable assumption, as in England taxation on both the upper and middle income groups will probably be pushed even beyond the point of maximum revenue productivity. There is still some margin in the middle income group in this country, but presumably it will be absorbed in the ordinary course of events in the near future. It seems likely that any additional revenues will come primarily from the lower income groups. The transfer would thus be a pocket-to-pocket transfer within the same group, not a group-to-group transfer.

During World War I taxation was advocated on the grounds of equity. It was apparently believed that only during a war could high taxes be levied on the upper income groups. If they were not taxed during a war the government would

have to borrow more, and the funds would come from these same upper income groups. In the postwar period it was expected that the burden of additional taxes required for debt charges would fall on the lower income groups. The contrast with the present proposal is interesting. Borrowing is now advocated to avoid the inflationary burdens on the lower income groups, but the borrowing must be from this same group. The immediate burden is to be partially offset by subsequent transfer payments from other groups. Keynes himself has demonstrated that, during the war, incomes of the lower income groups must be diverted to government uses because others are already fully taxed. This condition of being fully taxed is likely to be a continuing one. The proposed capital levy might have certain advantages as a means of paying a debt quickly and reducing subsequent annual tax charges, but the most enthusiastic proponents of a capital levy admit its undesirable effects and advocate it only as a lesser evil. It has never been suggested that an unnecessary debt be incurred merely because it will lead to a capital levy.

The second alleged advantage of the deferred pay plan over comparable direct taxation is that it would provide a desirable increase in consumer purchasing power during a depression. This assumes, first, that an artificial increase in consumer spending is an effective depression remedy. (The papers of Professors Williams and Haley indicate the reasons for skepticism on this point.) It also assumes that artificial increases in consumer spending would not take place or would be on a much lower scale if the deferred pay plan were not instituted. This is most unlikely. Large-scale relief payments with attendant unbalanced budgets are likely to be recurring features of future depressions, at least in this country. The less that has to be paid on specific obligations, the more leeway there will be to direct payments into the channels that are most desirable socially and economically.

The third alleged advantage is that a deferred pay plan will be the only way to avoid inflationary expenditure during a war. This may be true, and if true, the case for deferred pay is a strong one. Keynes has very clearly demonstrated the extent to which the immediate war burden, in the form of foregone consumption, has to be shared by the lower income groups, and the discriminatory and undesirable secondary effects of inducing this restriction on consumption by inflation. It seems unfortunate that the strong case for immediate and conscious foregoing of consumption should be tied in with a proposal for a subsequent transfer payment which in substance will probably be illusory.

War taxation is the most obvious alternative to inflationary war borrowing. It imposes taxes at a time when a general national sacrifice is expected and when taxes are probably more acceptable than at any other time. The war period may also be a time when the repressive influence is least serious. The relative seriousness of the repressive effect of taxation in a war and postwar period would depend upon the extent to which capital expansion and productive effort were subject to government control and regulation in the war period, and the degree of national unity behind a war program. In a war period featured by full utilization of resources, with effective operations stimulated by a sense of patriotism, with capital expansions limited to those required for the war effort, with government financing available for such expansion when needed, the re-

pressive effects of taxation on general economic activity would seem to be less serious than in a postwar period.

By direct taxation of individuals, a known total burden is imposed on all taxpayers, but they are left free to spend the remainder of their incomes as they choose. By indirect taxation, civilian demands can be directed away from those things whose production requires the use of productive factors important for defense work. Though sales taxes may be used to restrict and direct consumption, they are inequitable and undesirable as a means of controlling the use of necessities and quasi-necessities. Commodities for which everyone's demand schedule is relatively inelastic would be greatly increased in price in the process of securing a small reduction in consumption. The unfair burden thereby imposed upon the lower income groups is intolerable; direct rationing is the only equitable way to produce a proper sharing of the burden when universal sacrifice is required in the consumption of standard articles. Direct taxation, with rationing if necessary, seems appropriate. Indirect taxation in the quasi-luxury and luxury field is not objectionable. By proper adjustments of rates, consumption can be directed into those fields in which the productive factors are not transferable to war work.

Excess profits taxation designed to absorb a substantial part of any unreasonable profit increases arising from the defense or war effort are equitable and desirable to maintain public morale. This result is achieved by a tax on increases in profits over the pre-emergency period, with appropriate adjustment for changes in invested capital and perhaps some special allowance for depressed industries. It is not achieved by a tax based solely on invested capital, because such a tax will fall in arbitrary and capricious fashion upon some corporations whose alleged excess profits have been considered normal for a generation, while others will be permitted to increase their earnings manyfold as a direct result of war orders, without being subjected to excess profits taxation. A discussion of the desirability of a tax on profits based on the rate of return on investment as a permanent part of a tax system calls for an analysis of the role of profits in our economy, and is beyond the scope of this discussion, which deals with taxation only as an alternative to borrowing. It is important that we should not accept a controversial tax of this sort under the impression that it is a defense or war measure designed to prevent undue gains to some arising from the general sacrifice. As corporation taxes increase, either normal or excess profits taxes, we must be increasingly careful to distinguish between real and illusory profits and make adequate provision for companies with fluctuating incomes and for companies whose profits in the emergency period are likely to be offset by postemergency losses.

Depression Deficits. Professors Williams and Haley have appraised the theoretical arguments of those advocating depression deficits. The possibility of some benefit from depression deficits seems undeniable. But because of the multiplicity of other factors influencing our economic development over the past decade, it seems impossible to secure any satisfactory objective proof of the net importance of a single factor, the deficit, in this short period.

It has been extremely interesting to note the change in the arguments of the spending advocates. The pump-priming theory, on the basis of which gov-

ernment spending was first advocated, is now stated even by most of the spenders to be altogether naïve, and the program to be ineffective. The more recent argument in favor of deficit spending has been based on the "mature economy" arguments. Thus, instead of a relatively small temporary deficit, it is claimed that we need fairly large, quasi-permanent deficits as a regular feature of the economy to offset the savings for which there is no private investment demand. The papers under the general topic, "Economic Consequences of Deficit Financing," cannot devote much attention to the arguments about the alleged maturity of our economic system, but it should always be remembered that the deficit policy is predicated upon this highly controversial proposition.

Professors Haley and Williams have both commented upon the reasons why depression deficit spending may not produce its desired expansionary result. They have also noted certain of the undesirable effects which may follow a period of deficit financing. These effects must be weighed against any advantages in the form of immediate increases in the national income.

Professor Williams has indicated that a too ready acceptance of the deficit spending remedy may prevent us from making a complete diagnosis of our economic problems and keep us from adopting the balanced and rounded policies which we need. He has presented this point so clearly that one can do no more than repeat it and hope that it will receive the calm and serious attention which it deserves. Another major set of problems, which cannot be covered here, consists of the effects of the debt upon our financial system and upon our monetary controls and policies.

The burden of increasing taxation has been referred to in both of the preceding papers. We have heard little recently of the proposition first advanced a few years ago that a government debt was not a matter of concern because it represented, in a sense, a public asset. It seems unnecessary to point out again the speciousness of the analogies between government and business debt or to stress the fact that the things secured by government spending usually do not yield money income but necessitate increasing tax burdens on private money incomes to pay for social goods.

The distinction traditionally made between an internal and an external national debt is important for many purposes, but the statement that an internal debt requires *only* transfer payments may be seriously misleading. A growing internal debt must either lead to ultimate increases in taxation to cover the debt or it must be the cause of continuing deficits. It is true that payment on a domestic debt does not involve an outflow of wealth from a country, and a whole nation is not burdened in the same way that an individual is burdened by a personal debt. But it is not true that a national debt is inconsequential. Professor Haley has indicated briefly some of the effects of absorbing an increasing proportion of the national income through taxation. We must remember that people will behave in different ways when they are subject to different rates of taxation. A person's attitude as regards savings, investment, and his own work will change as the proportion of his income taken by taxation increases. The manner and degree of change will depend upon the nature of the tax imposed and the point of view of the individual, which will itself vary. Though some may exert more effort and assume more risk with the hope of securing the same net income

after taxes, it seems more likely that, in general, effort and venturesomeness will be decreased. Even in the extreme case in which the transfer is literally from one pocket to another of the same person, this seems probable. If, for instance, an individual purchased government bonds from savings that would otherwise have been kept idle, and was in fact later taxed an amount exactly equal to the interest he received, the effect would seem to be undesirable. A man with \$20,000 a year paying a direct income tax of \$4,000 or 20 per cent would probably be more inclined to undertake new activities than he would with an income of \$23,000, including \$3,000 from government bonds, subject to a total income tax of \$7,000 or approximately 30 per cent.

Professor Haley has presented the analysis necessary for a determination of the transfers between different income, age, and activity groups brought about by debt charges. Questions of equity, the effect on the amount and use of current savings, and on the use and maintenance of existing investments all depend on who gets the interest and principal repayments, if any, and who pays the taxes. Since a depression deficit is intended to be expansionary, it must tap otherwise unused or nonexistent funds. This will make it desirable to place the securities with the upper income groups, institutional investors, and banks. Transfer payments will be made to this group from whatever section of the population bears the burden of the taxes ultimately imposed because of the debt. It has been suggested with reference to the aftermath of war finance that in the future the scope of state activities and political circumstances will push taxation of the middle income groups to or beyond the point of maximum productivity regardless of debt burdens. If this is true, the marginal taxes required to meet debt charges will inevitably be imposed on the lower income groups. To this extent, the repressive effects of taxation on enterprise will not be directly attributable to debt charges; rather the debt burden will be on the lower income groups either through higher taxes or reduced social services.

If future tax increases, whatever their cause, are not to influence enterprise adversely, we must be able to demonstrate exactly what aspects of taxation are critical. Many wholly unintended and undesired features have crept into our tax structure. Certain of the more obvious bad features have been or are in the process of being removed. The proposed abolition of tax-exemptions from future government security issues and the recent reintroduction of loss carry-over will remove some of the unintended discriminations against venturesomeness. But we still have a strong emphasis on the annual calculation of taxable income; we have administrative practices which accentuate the penalties on fluctuating incomes by throwing many of the allowable deductions into loss years. We have a strong tax encouragement to the issuance and a mild tax encouragement to the purchase of debt instead of equity securities. The introduction of excess profits taxation makes past accounting policies, financing methods, and intercorporate relations of the greatest importance. Decisions made without reference to excess profits taxation now are found to have great significance in determining current and future tax liability. And in the light of probable future changes in the law, a large amount of effort and attention must be expended to prevent current business decisions from leading to extreme and discriminatory tax penalties. This statement should not be taken as a general criticism of the federal tax laws; much

of the complication which business complains about is due to special provisions put into the laws to facilitate desirable business developments, and many of the other complexities have been put in to block the efforts of overly ingenious maneuvers which clearly violate the intent and spirit of the law.

Those who advocate government spending to take up the alleged slack arising from inadequate private investment opportunities propose, as an alternative to deficit financing, high taxation of the incomes that would otherwise be saved. This alternative procedure would attack the disequilibrium between savings and current investment outlets by cutting down on the savings, with the government using the tax revenues in ways which would maintain consumption and employment. The direct effects of such a policy would clearly be in the desired direction, if one grants for the moment the validity of the mature economy or the oversavings concept. But here, as so often elsewhere, the proponents of an economic policy seem to stop with a statement of the obvious direct effects and ignore its repercussions and secondary effects, which may more than offset the direct advantages. The proposal to produce equilibrium between savings and investment opportunities by taxes which would fall on the segments of income destined for savings seems to be based on a false mechanical analogy; surplus savings cannot be siphoned away with no disturbance to the remaining savings and capital funds.

Taxes on income which would otherwise be saved are likely to be self-defeating for several reasons. One suggestion is for higher income taxation in the upper brackets, since the bulk of individual savings comes from the higher incomes. But as income tax rates increase, the relative attractiveness of different types of investments is considerably modified. The market differential between yields of different classes of investments must be increased to give the same net differential in yield after taxes. Also a greater tax burden is placed on fluctuating incomes because progressive taxes are based on annual and not on average incomes. Furthermore, higher personal taxes are likely to encourage the distribution of family estates before death, with a probable concentration of the donated property in investments of the trustee category. All of these forces would tend to drive investment away from the "venture capital" type which is so greatly needed in our economy. The very process of removing "surplus" savings may change the use of the current savings left after taxation and the use of the existing mass of capital funds in a way that will accentuate rather than relieve the difficulty. It must be remembered that annual savings are small in relation to accumulated capital. A small shift in the use of existing capital may be more important than the absorption of a large part of the annual increment to capital. If certain individuals adopt a policy of greater liquidity, involving disinvestment, they may sell investments to those with current savings and hold the proceeds idle, giving no new net investment for the system as a whole.

Higher corporation taxes designed to reduce corporate savings may also have offsetting secondary effects. Increases in the corporate normal tax will reduce either dividends or retained earnings, but it would be difficult to say which of these two results would be more important. The direct effect would be divided between reduced dividend income to individuals and reduced corporate savings. But also there will be, in many companies, secondary effects on inventory, credit,

and plant maintenance and replacement policies, on wage outlays and on advertising expenditures, and perhaps in some instances on price policies. Nor is it by any means clear how taxes on undistributed earnings, if adopted as a permanent feature, would influence the policies of business management with respect to dividends, holdings of liquid assets to tide over future losses, and plant expansion out of earnings.

Whether taxes are considered as immediate alternatives to or ultimate consequences of deficit financing, we need to know a great deal more about the specific sources and uses of investment funds and the motives of savers and investors. We need to learn more about the circumstances which influence the financial and plant policies of business, and about the reasons back of management's decisions to contract or to expand and to engage in new ventures. Balanced judgments on the effects of taxation can come only after we have more knowledge of investment and business policies and of the individuals who formulate them. Many variable factors will play a part in determining the effects of any proposed fiscal policy. Frequent reference to this fact and to the nature of some of the important factors seems justifiable if it discourages oversimplification and the use of unduly mechanistic concepts of income flows.

DIRECT VERSUS FISCAL AND INSTITUTIONAL FACTORS

By LAWRENCE H. SELTZER

Among the issues raised by deficit financing, none is of greater practical significance than the question of the relative importance of its direct short-run advantages and its unfavorable institutional repercussions. And none, unfortunately, is less susceptible of resolution by a priori analysis. Much of the controversy on deficit financing has failed to produce a real joining of the issues because of the highly divergent assumptions that are made with respect to the importance of institutional considerations.

I

The financing of exceptional expenditures by borrowing has long held a respectable place in the theory and practice of public finance. The most important fiscal consideration in support of such borrowing is the desirability of minimizing disturbances to the tax structure. The latter constitutes an important part of the legal and economic framework within which business plans and investment decisions must be made. Unnecessarily frequent or sharp changes in taxes are undesirable because they create economic dislocations and inequities. Every increase or decrease in the rates or scope of sales and excise taxes alters the relative competitive positions of the different commodities and of those dealing in them, because, among other reasons, the consumption of different goods is unequally responsive to price changes. In the case of corporation income taxes, those owning common stocks at the time of a rate increase tend to suffer a burden approximating the full capitalized value of the increase in the form of a decline in the market value of their holdings; conversely, a decrease in rates similarly tends to give a magnified bonus to those who own stocks at the time of the reduction.

In addition, economic progress is often counted on to expand the future revenues from the existing taxes, thereby making possible a painless absorption of the interest burden and perhaps also a painless retirement of the principal of debts incurred for exceptional purposes. Even if this optimism should prove exaggerated, the spreading of the costs of exceptional outlays over a period of years makes possible a more moderate increase in taxes, and this may justify the interest expense involved. When the expenditure is expected to be self-liquidating, as when the funds are used by the government to grant loans or to construct toll bridges, the case against burdening the immediate tax structure with the full amount of the expenditure is commonly regarded as decisive. But the general principle may be applicable even when no durable public improvement or self-liquidating asset is created: a fire or flood or the payment of a "soldiers' bonus" may occasion outlays which could not be met from the tax revenues of a single year without a violent and presumably temporary change in the tax structure.

But on the basis of traditional fiscal considerations alone, it is probable that students of government in this country have been less impressed by the occasional merits of public borrowing than by its disadvantages and dangers. In part, this is to be attributed to their observation that during the many decades of rapid expansion in our population and wealth the necessity of large public expenditures for such durable improvements as schools, roads, sewerage systems, etc., tended to

recur nearly as regularly as the ordinary operating needs of government. Consequently, when such improvements were repeatedly financed by borrowing, only a few years intervened before the growth of charges for interest and debt retirement created a larger burden upon the tax structure than would have resulted from the direct financing of the improvements from current taxation. Under these conditions, the superior fiscal results achieved by the relatively few state and local governments which practiced a "pay-as-you-go" policy in the financing of their public improvements as compared with those which resorted to continuous borrowing were naturally conspicuous. This practical experience of state and local governments, though it took place under the special conditions of rapid growth, tended to reinforce the natural prejudice against governmental borrowing that arises out of the uncritical application to public affairs of maxims of conduct that have won good repute for individuals.

II

To a national government, however, purely fiscal considerations need not always be of paramount importance. Government borrowing, taxing, and spending inevitably exert influences which transcend the fiscal sphere, and these may at times command primary attention in the determination of practical public policy. Moreover, much orthodox fiscal theory has been predicated upon the assumption of an unvarying state of full employment of the country's productive resources. Under this assumption government borrowing and spending can take place only at the expense of private borrowing and spending. Because of this assumption, orthodox fiscal considerations have naturally been regarded as of only secondary relevance and importance in connection with the objectives which distinguish present-day deficit financing.

In its broadest sense, deficit financing or deficit spending is conceived as a new instrument of governmental economic policy, designed to compensate for whatever deficiencies may be expected to occur in the volume of unaided private spending, and thereby to give employment to productive resources that would otherwise remain idle. It is conceived as a flexible instrument somewhat comparable to, but much broader and more potent than, the discount rate changes and open-market operations of central banks; and, as Professor Williams has pointed out, its role in contemporary economic thought is a natural extension of the philosophy of a compensatory central banking policy which obtained such a large following among economists and others during the twenties.

The early years of the Great Depression glaringly demonstrated the feeble character of central banking powers to stem and reverse a strong deflationary tide. Drastic reductions in discount rates and large-scale open-market purchases of securities by the Federal reserve banks operated to soften somewhat the urgency of liquidation and to ease purely financial stringencies. But the lesson had to be learned that large additions to bank reserves could take place without bringing about an appreciable increase in current spending and investment—in the demand for the current output of goods and services. Our colossal gold imports of more than 12 billion dollars since January 30, 1934, have swelled member bank reserves far beyond any amount that could have been expected from the boldest conceivable open-market operations on the part of the Federal reserve

banks—with little observable effect upon the volume of nongovernmental borrowing.

It was demonstrated that large additions to the reserves of commercial banks can be used principally to improve the latter's liquidity or to satisfy the demands of their customers for cash for hoarding and currency purposes, rather than to create new loans. It was likewise demonstrated that the effects of falling "pure" interest rates can be more than offset by a heightened sense of risk among both borrowers and lenders, and by inadequate organization and sluggish mobility of funds in the various capital markets. And it was demonstrated that the volume of bank credit may increase substantially through bank purchases of old securities without bringing about any significant expansion in the effective demand for current output. The sellers of the securities may merely use their new bank deposits as substitute investments. In other words, the increase in the quantity of the public's money may be fully offset by a decline in its rate of turnover. Thus, even a most vigorous exercise of all the expansionist powers of the Federal reserve banks cannot assure an increase in the effective demand for current output. For the banking system to bring this about, someone must be induced to borrow and spend for current consumption or investment. Deficit financing is calculated to supply precisely this inadequacy in the powers of the banking authorities.

Abstracted from institutional and psychological factors, the short-run theoretical case for deficit financing is unassailable, in my opinion. In its broadest terms, it merely holds that deficit spending by the government may compensate in greater or lesser degree for serious deficiencies in private spending. By the borrowing and expenditure of private funds that would otherwise remain idle, and by the creation and expenditure of new money to counteract hoarding, usually with the aid of the banking system, the government may make a net addition to the aggregate demand for the current output of labor and other production resources.

Any one or more of many reasons may account for temporary or prolonged declines in the volume of private spending, both for consumption and investment. Some of these reasons, such as fears generated by international disturbances, are beyond the control of any single government. Some of the declines originate in structural changes in the economy, such as the loss of important foreign markets. Some are doubtless cyclical. And some, conceivably, may be unusually strong reflections of a secular narrowing of investment opportunities. Whatever the cause, the result of reduced spending and investment is the disemployment of labor and other productive resources.

In a period of declining business activity, the government should surely give its attention to the underlying causes, if they are known and amenable to treatment, in an attempt to remove them. But often these causes will not be clearly known, or they may be beyond the power of government to remedy, or the processes of spontaneous or other correction may be so slow that new obstacles to recovery will be generated by the very continuance of the decline itself during the period of readjustment. In such circumstances, the government is confronted with these twin conditions: great perishable productive resources going to waste day by day, never to be retrieved; and a great demand for public expendi-

tures for the relief of distress. If, at such a time, the government borrows the unused purchasing power of the public and puts this purchasing power and the correlative resources to work by public spending and investment, there is clearly an immediate gain—provided, of course, that the government's spending does not induce an equivalent contraction in private spending. The great appeal of deficit financing is that, from a short-term standpoint, at any rate, it seems to provide a practicable answer to the question: "When the men, the materials, the skills, and the needs exist, is there no financial technique by which we can organize these idle resources to produce what is needed?"

If the government obtains good or exceptional value for its deficit expenditures, judged by ordinary commercial standards, so much the better. But even if the funds are expended on what appear to be frivolous objects, or if useful work is purchased at excessive cost, the case is different from that of spendthrift spending. In the first place, even if little useful work is supplied for the government's money, that little is better than none at all, and in a depression, no work may be the only real alternative. And second, the subsequent spending of the funds by the original recipients and their payees is likely to create additions to the private demand for goods and services.

Obviously, if all other things were equal, it would be most desirable for the government to obtain full commercial value for its deficit spending, and to confine its outlays to projects of pressing public importance. But first-rate projects are not always readily available in every locality, and even unemployed labor is relatively immobile. Where the practical alternative is sheer idleness and waste of productive resources, projects which would otherwise be inferior, become worthy objects of expenditure. True "spendthrift spending" can take place only when truly practicable superior alternatives are neglected.

In this broad sense, the theory of deficit financing is by no means tied to the theory of pump-priming proper. This point was stressed by Professor Haley. Nor is it tied to an interpretation of "the multiplier" that makes the latter peculiarly applicable to government or investment spending as contrasted with private or consumption spending, an interpretation which was properly criticized by Professor Williams. Nor is it tied to any particular theory of the business cycle nor to the hypothesis of secular stagnation.

These special views are of considerable significance, however, in connection with the political, psychological, and general institutional receptivity to deficit financing. Resistances to such receptivity would be minimized if experience demonstrated that a moderate amount of deficit spending in depressions led to such a multiplied increase in consumption that, particularly with the aid of the additional private investment induced by the growth of consumption, a self-sustaining business recovery must result. On the other hand, if, in line with the broad view outlined above, it is held that the test of the short-run efficacy of deficit financing is not the generation of a self-sustaining business recovery, but the production of any improvement whatever in the national income, conditions are conceivable in which an improvement could be purchased at too high a cost in terms of longer-run institutional considerations.

Similarly, if deficit financing were employed primarily for cyclical compensation, and if we actually experienced the relatively well-behaved business cycles

that are described in some textbooks, with periods of prosperity commonly equalling or exceeding those of depression, the institutional resistances to deficit financing would be greatly reduced. In fact, the case for a cyclical as opposed to an annual balancing of the federal budget derives as much support from traditional fiscal considerations as from monetary ones. In an economy as fluctuating as that of the United States, a stable tax structure, particularly if it relies significantly upon progressive taxes levied upon incomes and estates, must be expected to produce highly variable annual revenues. Attempts to avoid temporary deficits by increases in taxes during periods of business depression (presumably followed by corresponding tax reductions in prosperous years) involve the undesirable consequences of an unstable tax structure that I have previously cited, as well as other difficulties. On the other hand, attempts to avoid cyclical deficits by prompt reductions in governmental expenditures whenever tax revenues threaten to decline involve an undesirable instability in the volume of governmental services, and one that is perverse, calling for contraction at precisely those times when the demands are greatest. In addition, the actual employment of these alternatives is subject to the severe practical difficulties of accurate forecasting, legislative controversies, and delays in execution. A policy of maintaining over the period of a complete business cycle a relatively stable tax structure which is strong enough to meet all the demands of the period, including the retirement of debt incurred in the deficit years, would avoid or reduce these fiscal and practical difficulties.

The cyclical philosophy of deficit financing involves an extension of orthodox fiscal theory, but not a violent break with it, and is now rather widely held. Since the depression of 1937-38, however, as Professor Williams has indicated, it has been supplemented and in considerable part supplanted by the doctrine that deficit financing will be required indefinitely to compensate for a secular shortage in private investment outlets. It is this doctrine that raises most acutely the question of the practical importance of the psychological and institutional resistances to deficit financing and to an indefinitely protracted growth in the public debt.

The plausible considerations that are advanced in support of the hypothesis of secular stagnation are well-known: the marked slowing down in the rate of our population growth, the disappearance of our geographical frontiers, the non-appearance of any new large capital-using industries, and the fact that many recent technological advances have economized rather than added to the need for capital. Further, despite this contraction in investment outlets, individuals and business institutions, motivated by private considerations, continue to attempt to maintain a high level of pecuniary savings. Various institutional practices, such as life insurance, which cause savings to be regarded as regular charges upon income, as well as our pattern of income distribution, contribute to this result. In consequence, the volume of private investment is insufficient to absorb the funds withheld from current consumption by the savers—with resulting unemployment of labor and other resources. Accentuating the difficulty, has been the growing replacement of the individual investor by the institutional investor. The former has been more willing to assume the ordinary risks involved in common stock and other equity investments, the supply of

which is less restricted than that of the highest grade bonds. The institutional investor is largely confined by legal and other considerations to fixed-interest securities, particularly those of the highest grades. Illustrating the great growth in the importance of the institutional investor is the fact that between 1925 and 1940 the total admitted assets of American life insurance companies increased from 11.5 billion dollars to about 31 billions.

III

The institutional weaknesses of deficit financing arise in part out of certain inherent limitations.

Deficit financing is primarily an over-all ameliorative or compensating instrument rather than a curative agent for all the various kinds of depressions. It is not an underlying remedy in the sense that it removes specific causes. It cannot restore lost foreign markets to the American farmer or revive older investment practices or loosen monopolistic controls or create new industries that will provide adequate and continuing private outlets for savings. It is not an adequate substitute for the direct treatment of any specific maladjustments that are amenable to control.

Because it does not remove underlying causes, the compensatory action of deficit spending is short-lived; it does not perpetuate itself. This year's government borrowing and spending will have little, if any, influence upon the need for a similar supplementation of private spending a few years hence. This is most palpably true of spending designed to compensate for secular stagnation.

Further, the compensatory action of deficit financing is not uniform upon all parts of the economy, nor can it be accurately canalized or localized. Our economy is never uniformly depressed. Industries and areas that are enjoying an underlying vitality or growth are likely to receive disproportionately large benefits from the secondary spending generated by the government's deficit outlays, however the primary spending may be directed. This has been illustrated in a general way by the relatively disproportionate prosperity of the automobile industry since 1934. In contrast, abnormally depressed industries and areas are likely to be suffering from structural damage or secular decline, and are therefore much less likely to participate proportionally in the secondary demand generated by deficit spending. Certain of our agricultural areas and the railroad equipment industry may be cited as recent examples. Moreover, the direct aiming of primary spending at abnormally depressed areas may operate to delay as well as to cushion necessary economic adjustments. New England towns whose textile enterprises are moving South need substitute industries or mass emigrations; WPA road work is a stopgap.

But the principal difficulty with deficit financing is that its short-lived stimulation is usually purchased with much longer-lived and not easily extinguished increases in the public debt. The rhythm of the business cycle is a most irregular rhythm at best. Not all business recoveries culminate in a period of actual or threatened inflation, when alone debt *reductions* would be indicated for their compensatory effects. At all other times, debt retirement would run the risk of exerting a deflationary influence by converting part of the income of the lower-income groups into gross savings (capital return) of the upper-income groups.

On the other hand, if debt retirement is confined to peak periods, it is likely to be confined to times when it will feed a boom by pouring funds into the capital markets. The temporary hoarding by the government of part of the proceeds of taxation would seem better designed than debt retirement for restraining an inflationary boom. In short, occasions for debt retirement that would be consistent with a thoroughly compensatory use of deficit financing might well be much less frequent and less pronounced than occasions for deficit financing. If, to sporadic and cyclical compensation, we add the deficit spending that may be needed for secular compensation, we arrive at the prospect of an unending expansion in the public debt.

The mere growth in the public debt creates an increasing absolute tax charge for interest, assuming no reduction in interest rates, and, unless offsetting changes are made in the tax structure or in public expenditures, the resulting tendency is to increase the concentration of income. Professor Haley has reminded us of Pigou's dictum to the effect that no tax structure is likely to be made as progressive as a loan subscription list. Moreover, the necessity of passing an increasing proportion of the national income through the public treasury is attended by growing difficulties and costs of levy, collection, and transfer.

Some would reduce the tax problems by concentrating deficit spending upon durable public improvements. This is surely desirable whenever possible. To the extent that the additional improvements add more to the national income than their interest (and maintenance) costs, the *relative* burden of taxation (relative to the national income) is reduced, other things being equal. On the other hand, while such durable consumption improvements as parks may promise to add valuable services to the national income for many years, the taxes levied to pay interest on the bonds issued to finance their construction may conceivably require some sections of the public to reduce their consumption of other goods and services. Moreover, the compensatory action most needed or most practicable in a given situation, in view of the distribution and character of idle productive resources, might well consist rather of a direct expansion of current consumption.

Further, if we are to be consistent in offsetting a growing debt and growing interest charges by confining our deficit spending to productive investments, we should properly provide from tax revenues either for the amortization of the debt as the investment is used up or for the maintenance of the value of the investment by current replacement expenditures. Thus, a debt contracted for a 20 million dollar public improvement that is expected to last twenty years should either be retired within that period or equivalent replacements should be provided through the operating budget, regardless of economic fluctuations. But neither of these procedures might accord with the demands of a compensatory spending policy. In fact, they are wholly irrelevant to the purposes of a compensatory fiscal policy.

The psychological difficulties that may be created by long-continued deficit spending and a long-continued expansion of the public debt are capable of becoming more important than the technical ones. There is little doubt that there exists today a widespread apprehension and distrust of deficit financing or deficit spending on the part of the general public. Nor is this surprising. The word deficit comes down to us from the past freighted with unpleasant implica-

tions of a net loss in wealth. The word spending has a more agreeable ring, but it, too, connotes a using up of resources. The expression deficit financing likewise suggests imprudence—the financing of one's needs by going into debt. This idea is likely to be especially repugnant in bad times, when the burden of previously incurred private debts is most oppressive and when the private rewards of past frugality and debt avoidance appear most conspicuous. It is not surprising that an important section of public opinion regards all governmental deficits as the dangerous products of spendthrift policies. This feeling undoubtedly exerts some deterrent influence upon the flow of private investment; but, more important, it renders any long-term program of deficit spending subject to violent political reversals.

Ideally, compensatory spending by the government should involve no aftermath in the form of debt charges. Its purpose and its direct effects are, as we have seen, short-term in character. Why, then, it may be asked, do we not finance our deficit spending by government issues of paper money? Such issues could conceivably be retired with the proceeds of taxation in the same way as interest-bearing obligations, whenever inflation threatened. There are two principal reasons, I think, why we do not resort to such a method of financing. The less important is the technical objection (which conceivably could be met by appropriate changes in the banking system) that such a method would increase bank reserves and would therefore make possible a severalfold increase in bank deposits. The second and more important objection rests upon the basis of past experience with the great susceptibility of governments to the temptation of excessive issues. The inequities, economic dislocations, and social disruptions that have resulted in the past from inflationary misuses by governments of their powers over money have created a deep-seated and powerful public distrust and antipathy to any overt manipulation of the currency. This antipathy is a real and important economic and social fact which cannot be ignored in a country with democratic controls.

But some of the same sentiments, prejudices, and fears, though in lesser degree, apply to a rapid growth of the public debt—partly because of the uncritical analogy commonly made with the consequences of excessive personal indebtedness, but also because unwieldy public debts have been conspicuous fore-runners and accompaniments of currency abuses in the past. Hence, a large and growing public debt must be regarded as a potential threat to public confidence, though much can doubtless be done by way of management to minimize its disturbing possibilities under ordinary conditions.

The confident formulation of a long-term public economic policy on the basis of an indefinitely prolonged expansion of the public debt requires a pyramiding of favorable assumptions. Compound interest even at today's so-called "low" rates runs into astronomical figures when applied for prolonged periods or to large principal sums. At $2\frac{1}{2}$ per cent, the interest charges alone on a 5-billion-dollar-a-year deficit financing program reach 5 billion dollars annually in forty years. The problem of maintaining, not to mention that of sharpening, the progressiveness of the tax structure becomes increasingly difficult under a load of expanding debt charges—unless, of course, the latter are merely added to the deficit. Is a declining interest rate counted on to relieve this problem?

And what of the relationship of a growing public debt to our banking system? What is the prospect for the recovery by our commercial banks of any large part of the 20 billion dollars of customer loans that they have lost during the past ten years? If an important loan expansion should get under way, would the banks attempt large-scale liquidation of government securities, and with what effects? The ability of the banks to absorb additional amounts of government securities and thereby to add further to the total volume of bank deposits (other things being equal) is largely governed by the amount of their excess reserves; but attempts to prevent a needless and possibly dangerous further expansion in the volume of deposits by reducing bank reserves may create trouble of another kind by increasing the sensitiveness of the market prices of government securities, which now constitute the principal secondary reserves of our banks.

How valid is the view that we need a reserve of borrowing power for the emergency of war? The answer to this question obviously depends to a considerable degree on the extent to which our future wars will involve the authoritarian controls of rationing, price-fixing, priorities, conscriptions, etc.

IV

The importance of these and similar considerations will be differently assessed by different students, both in detail and in the aggregate. The point at which the direct beneficial effects of further deficit financing will be more than offset by its unfavorable psychological and institutional repercussions, both immediate and longer-term, is obviously a practical question to which there can be no a priori answer. The answer will vary with different attendant circumstances. It is an answer that cannot be made long in advance, for our prescience in these matters is extremely limited.

The fact that deficit financing entails longer-run institutional problems is not decisive against its use at times even on a large scale and for fairly prolonged periods. The problems of our own generation are surely no less compelling and are entitled to at least as much consideration as those of the future. Under some circumstances, deficit spending may constitute the most practicable and least violent means available to promote orderly readjustments in our economy to changed conditions.

But the continuing success of deficit financing as a quasi-permanent public policy would seem to require the convergence and pyramiding of many assumptions with respect to public psychology and institutional behavior in a fashion at variance with our past experience. For this reason, it would be imprudent to count too heavily upon it. Further, I share Professor Williams' fear that preoccupation with the immediate gains of deficit financing is apt to lead to neglect of specific problems and of the specific remedial readjustments that are possible with respect to them. Finally, I wish to reiterate that implicit but unrecognized disagreement with respect to the character and importance of the institutional repercussions explains the sterility of many debates on deficit financing.

AGRICULTURE IN THE AMERICAN ECONOMY

(Two main papers and two review papers)

AN APPRAISAL OF THE NATIONAL INTEREST IN THE AGRICULTURAL SITUATION

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Sometimes we may feel that the agricultural problem is overdiscussed. And certainly a considerable number of economists and statisticians are committed to the idea that the agricultural problem is only incidental, or at least that it is "readily manageable" only to the extent that our industrial and financial troubles can be solved.

This, however, is an oversimplified approach. For, even granting that a desirable level of nonagricultural income is attained, a considerable number of our agricultural difficulties would still exist. And it also must be recognized that farm people and agricultural enterprise often tend to lag behind or to respond at a slower rate to social and economic changes than do commerce, industry, or finance, or the entire nonagricultural sector of our social and economic system.

This lag,² or the feeling of farmers that they were caught in it, was one of the outstanding causes of the continuing agitation for farm relief from 1922 to 1933. And it is with this lag and certain other social and economic factors affecting the agricultural situation that this paper is concerned. Attention will first be centered upon the relation between agriculture and the rest of the American economy and some of the reasons why we should all be interested in the farm problem. Second, an attempt will be made to analyze the current situation and to show why agricultural incomes, prices, and standards of living lag behind or are depressed below what might be considered a desirable level. And third, an attempt will be made to outline

¹ The author wishes to acknowledge the collaboration of O. V. Wells, of the Bureau of Agricultural Economics, in the preparation of this paper, as well as the suggestions of several other members of the Bureau who read and criticized the manuscript.

² Although most agricultural discussions center attention upon the immediate differences in incomes and standards of living, the existence of this continuing lag is occasionally recognized. For example, John D. Black recognizes "that partly as a matter of historical carry-over . . . and partly as a matter of continuance of potent institutional holds, the rank and file of farm families are still habituated and bound to accept smaller returns than do comparable urban groups. . . . A further point . . . is that if these institutional holds could all be broken, less of the social product would be absorbed in the handling of farm products after they leave the farm, and less in producing and distributing urban goods and services; and in consequence farmers would receive a larger volume of real goods and services in exchange for this production. If in addition the habituations of farm folks to accept relatively low incomes were shattered and dissolved, we could have more farm families than now living on a higher plane of living—'quality' as well as 'quantity' of farm population being raised." "The Problem of Surplus Agricultural Population," *International Journal of Agrarian Affairs*, October, 1939. And even so able a critic of the agricultural movement as Joseph S. Davis says that the period 1924-29 "was truly one of remarkable progress, industrial and general, with agriculture lagging somewhat behind . . ." "Agriculture and the Nation's Business," *Harvard Business Review*, Winter, 1939.

the problems which must be met if farm people are to achieve a more desirable standard of living and to indicate some of the factors which must be considered in working out a satisfactory program directed toward this end.

I

Economists often argue that the real or essential problem facing agriculture is that of bringing about an increase in general business activity and employment. Obviously, the farmers' interest in increasing nonagricultural income is direct and immediate, since over nine-tenths of the cash income from farm production is derived from the money income of consumers in the domestic market.³

Although there is considerable truth in this argument, there is also considerable truth in the reverse argument. Farmers after all still constitute one-fourth of our national population, and farming itself is still the most important single industry in the nation. Another sizable part of our population is directly engaged in transporting, processing, and selling farm products, or in selling goods to farmers; and the prosperity of this group is related directly to that of the farm population itself. In addition, it is upon the farmers and the land which they care for that we must depend for food and for such nonfood products as tobacco and cotton.

As consumers of nonagricultural services and commodities, the one-fourth of the population living on farms constitutes about one-eighth of the national market. About one-fourth of the operating revenue of railroads is derived from the transportation of agricultural products; and altogether our farms supply about two-fifths of the raw materials used by our factories, and the processing and fabrication of these materials account for over one-third of our total factory employment.

So even though farmers themselves receive only about one-tenth of the national income, as such income is ordinarily calculated, the extent to which farming is prosperous or depressed exercises much more than a one-tenth weight upon the national situation. But we must also consider agriculture's continuing contribution to our greatest single resource—the future population. The farm population today accounts for almost one-third of our children, and it is these children who constitute the best single guarantee of continuing prosperity and national strength over the years ahead. Stated another way, our farm population is providing about one-half of the annual excess of births over deaths, or about one-half of the current increase in population. And it is upon the demand created by this further increase in our population, as well as upon the creation of a more effective demand among the low-income farm families and consumers generally throughout the nation, that we must depend for a market for the continuing industrial expansion which most of us think is so badly needed. As a result, it seems

³ See Louis H. Bean, "The Interest of Farmers in Greater Industrial Production," "Farmers in a Changing World," *Yearbook of the U. S. Department of Agriculture* (Government Printing Office, 1940).

only reasonable to conclude that factory workers, sales people, businessmen, and the nonagricultural group generally should be as much interested in bringing about a stable and prosperous agriculture as the farmers are in seeing that nonagricultural income is increased and maintained.

II

The agricultural situation is currently characterized by ample or surplus stocks, especially of wheat, the feed grains, tobacco, and cotton, by a good harvest, and by prices about the same as those which were established immediately following the outbreak of World War II. Farm income is still below the parity level.⁴

But these are only surface indicators. We must go much deeper if we are to understand correctly the real agricultural situation. For the essential elements in the situation are measured not in terms of millions of bushels of grain or millions of bales of cotton but in terms of unused acres, unemployed and underemployed farm workers, and rural standards of living which are too often substandard. We now present some of the underlying forces which need to be considered.

Rural Unemployment and Underemployment. According to the unemployment census,⁵ there were well over one and one-half million males living on farms who were unemployed or who had only partial or emergency employment in 1937. Of this number almost one-half were totally

⁴ For an excellent statistical discussion of the agricultural situation in terms of trends in production, prices, incomes, and such related factors as yields, output per worker, marketing spreads, taxes, indebtedness, tenancy, etc., see John D. Black and Nora Boddy, "The Agricultural Situation," *Review of Economic Statistics*, May, 1940. The commodity outlook for 1941 is discussed in the bulletin of the Bureau of Agricultural Economics, *The Agricultural Situation* (October, 1940). Some selected data are included in the following table:

SOME SELECTED SERIES RELATING TO THE AGRICULTURAL SITUATION, 1910-14 TO 1940

	Farm Prices			Farm Population		Farm Contribution to Nat'l Income ^c	
	Rec'd	Paid ^a	Ratio ^b	No.	% Total	Amount	%
	1910-14 = 100					Dollars	
Av. 1910-14	100	100	100	32,105	34.0	5,125	16.6
Av. 1915-19	161	151	107	31,904	31.5	9,375	19.0
Av. 1920-24	151	161	94	31,415	28.8	7,409	11.6
Av. 1925-29	147	155	95	30,405	25.9	8,344	10.6
Av. 1930-34	88	122	72	31,020	24.9	4,435	7.6
Av. 1935-39	106	124	85	31,845	24.7	6,429	9.6
Est. for 1940	97	122	80	32,245	24.6	6,600	8.9

^a Prices paid, including taxes and interest.

^b Ratio of prices received to prices paid.

^c Agricultural income payments as estimated by Department of Commerce, 1929 to 1939, and by Bureau of Agricultural Economics prior to 1929.

⁵ Based on *Census of Partial Employment, Unemployment, and Occupations: 1937*. Also see: Raymond C. Smith, "A Need for Work, A Need for Workers," *Land Policy Review*, May-June, 1940.

unemployed, while something over one-third had partial employment, and about one-sixth were employed in emergency public work by such agencies as the Works Progress Administration, the Civilian Conservation Corps, and the National Youth Administration.

These estimates are only indicative, but agriculture is certainly characterized by far too large an amount of unemployment and underemployment. About one-half of our farms account for about 85 per cent of the total farm production. This can only mean that there is an excessive amount of direct or concealed unemployment among the remaining one-half. In fact, the suggestion is often made that our agriculture could be run with about 50 per cent of the current farm population. Surely agricultural production could be maintained at or close to its current level with a considerably smaller number of farmers than are now engaged in agricultural work. For example, should farming generally be conducted on about the same scale and income level as that which currently prevails in the corn belt, it would require a reduction of about 25 per cent in the total number of farms and in the present farm population.⁶

Not only are agricultural workers unemployed, but to a considerable extent the same thing is true of our agricultural land and equipment. Surplus acres, of course, account for our efforts to divert some 25,000,000 to 35,000,000 acres of good agricultural land to what are essentially "lower" or more extensive uses; that is, from cotton, corn, wheat, and tobacco to cover crops, grasses, or forest. The real problem, then, is not agriculture's capacity to produce, but rather the pressure of excess agricultural supplies upon a restricted market. It is in this direction that our attention will next be turned.

The Foreign Market. Farmers have long relied upon the foreign market to drain off excess stocks or surplus production. But the export market has been disappointing since shortly following the close of the World War, and the current prospect is none too good.⁷

Over the long run, there seems to be a continuing down trend in agricultural exports which was only temporarily interrupted by the World War. There is nothing to indicate a reversal of this trend following the close of World War II.

As early as 1914, it was becoming apparent that our exports of grain and livestock were beginning a downward trend. The World War reversed the trend, and our exports of foodstuffs increased materially, being main-

⁶ This estimate is from O. V. Wells, "How Many Farmers Do We Require?" *Land Policy Review*, September, 1940. Another estimate will be found in Nourse's statement: "It seems clear that there was in agriculture in the late 1920's an unutilized labor force equal to at least 20 per cent of the total. A part of this could have been absorbed in agriculture with its existing equipment, thereby substantially increasing agricultural output." E. G. Nourse, *America's Capacity to Produce* (The Brookings Institution, Washington, 1934), Ch. I.

⁷ For an analysis of the trend in agricultural exports from the United States through the World War period, and an accurate appraisal of the future outlook as it appeared in 1924, see: E. G. Nourse, *American Agriculture and the European Market* (New York: McGraw-Hill, 1924).

tained at a very high level for several years following the War while European agriculture was being reconstructed. Around 1923 or 1924, however, it was again becoming apparent that our export market was going to contract. We had ourselves shifted from a debtor to a creditor status, we insisted on maintaining our tariffs, and countries such as Canada, Argentina, Australia, and several sections of Africa were becoming increasingly important competitors in the foreign market. Since 1929, other competitive areas have developed, and world-wide depression and the rising tide of nationalism have further adversely affected our foreign market.

Although only a small percentage of our total agricultural production ordinarily goes into foreign trade, we normally export about one-half of our cotton crop, about one-half of our flue-cured tobacco crop, a very considerable portion of our apples, raisins, prunes, and some other special commodities; and prior to 1934 we normally exported one-tenth to one-third of our wheat and almost one-third of our lard. For these commodities the situation today is such that farmers cannot afford to sell their surpluses in the export market for what they will bring unless effective means can be devised for protecting the domestic market.

Trends in Domestic Consumption. Domestic demand is one of the most fundamental factors affecting the agricultural situation; and since the demand for agricultural commodities tends to be inelastic, the actual quantities needed for domestic consumption are becoming increasingly important. An analysis of the total domestic consumption of agricultural products indicates that the per capita consumption of food has been remarkably stable since the World War, despite the relatively good income level maintained in 1922-29 and the severe depression characterizing so much of the period since 1930.^a

^a ACREAGE, PRODUCTION, AND UTILIZATION OF DOMESTICALLY-PRODUCED AGRICULTURAL COMMODITIES IN TERMS OF ACREAGE EQUIVALENTS, 1909 TO 1939

	Acreage Harvested		Utilization of Production, Av. Yield Equivalent ^a			
	Actual	Av. Yield Equivalent ^a	Human Consumption		For Export	For Workstock ^b
			Total	Per Capita		
		1,000 Acres		Acres	1,000 Acres	1,000 Acres
1909-14	320,000	320,000	181,000	1.90	41,000	88,000
1919-24	361,000	357,000	221,000	2.00	56,000	81,000
1925-29	360,000	360,000	239,000	2.05	52,000	68,000
1930-34	362,000	342,000	243,000	1.95	36,000	57,000
1935-37	319,000	274,000	225,000	1.75	20,000	44,000
1937-39	336,000	366,000	265,000	2.05	30,000	48,000

^a Acreage that would have been required if average yields for 1923-32 had obtained, except cotton and tobacco which are on basis of average yields for 1932-36.

^b Acreage at average yields to supply average ration per head of workstock, except for a 15 per cent downward adjustment to allow for drought in 1935-37.

There is no question but that it would be desirable for many classes of the population to consume greater quantities of food. If all our consumers were to have diets which the nutritional experts consider adequate, the result would be to increase vegetable consumption by at least 50 per cent and dairy consumption by at least 15 to 25 per cent. Or if the real incomes of all low-income families in the United States could be increased to \$100 a month, the consumption of agricultural products, including cotton, could apparently be increased about one-eighth, or the equivalent of about 30,000,000 to 35,000,000 acres of cultivated cropland.

Such data as these invite us to action. We must recognize, however, that agriculture is only one sector of our economy and that something more than the continuing production of foodstuffs on an ample scale is needed. We must have some way of seeing that the surplus foodstuffs get to the consumers with deficient diets. We cannot expect the farmers themselves to carry the whole burden of this job.

Whatever the devices which we may develop, it is probable that increases in consumption will be relatively gradual, since not only changes in consuming customs will be involved but increases in food consumption will also tend to limit the increases in consumption of other types of goods which so many in our population seem to want so much.⁹

Technology on the Farm. The number of agricultural workers declined from one-half to about one-fifth of the total of all workers in the United States between 1870 and 1940. The forces responsible for this change were, on the one hand, the ever increasing demand of the American people for industrial products and nonagricultural services and, on the other, the increasing mechanization and technological efficiency of agricultural production itself.

The technological development to which attention is most frequently called is the shift from workstock to automobiles, trucks, and tractors in our cities and on our farms which has been under way since about 1910. Altogether, this shift has reduced the number of workstock by about 13,500,000 head during the last quarter of the century and has released for commercial production the equivalent of at least 40,000,000 acres of cropland as well as a considerable acreage of good pasture land. This shift has in effect increased the supply of agricultural products available for the commercial market by at least one-eighth.

But there have been other developments in the technological field that have been equally important. The continual improvement in plants and

⁹ For an extremely interesting analysis and statement of this entire problem of underconsumption see: Milo Perkins, *The Challenge of Underconsumption*, a statement by the President of the Federal Surplus Commodities Corporation to the Fourth Annual National Farm Institute, Des Moines, Iowa, February 24, 1940. Also see: Hazel K. Stiebeling, Marius Farioletti, F. V. Waugh, and J. P. Cavin, "Better Nutrition as a National Goal," "Food and Life," *Yearbook of the U. S. Department of Agriculture* (Government Printing Office, 1939).

animals in general has been sufficient to more than offset the effect of declining fertility and shifts to lower grade land. Although most of these developments have been fairly gradual, the recent shift to hybrid seed corn was quite spectacular. Altogether, it is estimated that hybrid seed is being used on about three-fourths of the corn acreage in the corn belt and that our annual production averages 125,000,000 to 150,000,000 bushels above what it would if the old open-pollinated seed were still being used.

Technological change is still going on, and at a rapid rate indeed. The substitution of tractors and automotive power for horses and mules is not yet completed, especially in the South. A recent study of technology and its effects on farm people and employment indicates that at least 350,000 to 500,000 workers may well be displaced over the next fifteen to twenty years. Assuming especially favorable conditions, a far greater displacement could be expected. In the past, of course, mechanization has generally favored the larger size farms, and this can be expected to continue to a considerable extent. On the other hand, there are some developments, such as the small rubber-tired all-purpose tractor and the increasing spread of electricity, which tend to give the moderate- and small-sized farms a chance to use new methods at a reasonable cost.

In short, technological developments in the past have enabled agriculture to produce an increasing volume of agricultural commodities for the commercial market with the same or a smaller number of agricultural workers, and this trend can be expected to continue over an indefinite period.¹⁰

Farm Population. Although the farm population now represents about as small a part of our total population as at any time in the past, it has tended to increase in terms of absolute numbers since 1930. Moreover, about 50 per cent of the current increase in our national population is accounted for by the farm population even though it constitutes only 25 per cent of the actual total.

Farm population increased about 2,000,000 between 1930 and 1940, with the greatest increases coming in counties in which living standards are lowest.¹¹ Altogether, there are 3,000,000 farm families today trying to exist on abnormally low incomes, and without migration the number of farm people in the areas where those families are now concentrated would be doubled by 1970.

Farm population has outrun resources in the Southern Appalachians, in the Great Plains, the Lake States cutover areas, the Spanish American sections of Arizona and New Mexico, and over much of the cotton belt.

¹⁰ For a full discussion of technology in relation to agriculture, see: *Technology on the Farm*, a special report by an Interbureau Committee and the Bureau of Agricultural Economics, U. S. Department of Agriculture (Government Printing Office, August, 1940).

¹¹ See: *Farm Population Estimates, January 1, 1940*, U. S. Department of Agriculture, Bureau of Agricultural Economics, Washington, July, 1940.

This has created a double problem; that is, standards of living in these areas are themselves low and the farm people who have left or been forced out of such areas have created a difficult migratory labor problem, especially on the Pacific Coast.¹² Mechanization and the need for agricultural adjustment further intensify this situation. As was indicated earlier, normal requirements for both the domestic and foreign markets can now be met with a substantially smaller number of agricultural workers than are available or than would have been required several years ago, say in 1929.

Standards of Living. Farm standards of living, or the material content of the agricultural way of life, are too often not comparable with those of the rest of the nation. That is, farmers have less to spend in what is essentially a cash economy; farm children have inferior educational facilities and medical attention; and farm people generally live without the conveniences which most urban people accept as standard.¹³

Some idea of how well farm people are getting along can be obtained from certain estimates relating to the size and distribution of agricultural incomes in 1935-36. Slightly over 600,000 farm families received some form of direct relief, and of the other 6,000,000-odd farm families, almost 4 per cent received less than \$250, 14 per cent between \$250 and \$500, 18 per cent between \$500 and \$750; altogether, 52 per cent received less than \$1,000.¹⁴

At the same time, it was estimated that even a minimum standard of living with extremely small allowances for education, amusement, and cultural advancement required an income of at least \$705 in the South, \$820 in the North, and \$845 in the West, or a national average of about \$750. This means, then, that the 36 per cent of the nonrelief farm families with an income of less than \$750, as well as the greater part of the 600,000 farm families on relief, were living at a level which is undesirable regardless of any relative arguments that might be advanced.¹⁵

¹² For a short but well-organized discussion of this migratory problem, see: Paul S. Taylor, *Drift on the Land*, Public Affairs Pamphlet No. 42 (New York: Public Affairs Committee, April, 1940).

¹³ Admittedly, we could argue almost endlessly as to what is or is not a satisfactory standard of living. Any final judgment, however, must be based upon what the people themselves want or are willing to accept. And, certainly, the steady migration from farms to cities whenever the opportunity is offered, the desire of so many of the abler young farm people for urban employment, and the attitude of the mass of the young city people toward farm life, all combine to indicate that agricultural incomes and standards of living are on a relatively low level. A graphic description of what modern conveniences might mean to the farm home will be found in the documentary film, *The Power and the Land*, recently released by the Rural Electrification Administration. Some interesting material will also be found in *The Outlook for Farm Family Living*, 1941, Bureau of Home Economics, U. S. Department of Agriculture, October, 1940.

¹⁴ Arranged from data in *Consumer Incomes in the United States: Their Distribution in 1935-36*, a report of the National Resources Committee (Government Printing Office, 1938).

¹⁵ See: James G. Maddox, "Suggestions for a National Program of Rural Rehabilitation and Relief," *Journal of Farm Economics*, November, 1939.

With respect to relative standards of living, there are certain indexes to which attention may be briefly called.¹⁶ To begin with, almost one-third of the children of the United States are farm children, and these children and their parents are asked to accept medical facilities which, measured in terms of number and character of doctors, dentists, nurses, and the hospital space in relation to population, are in general inferior to facilities available to the urban group.

The story is the same when education is considered. Although almost one-third of the children five to seventeen years old are farm children, farmers receive not more than 10 per cent of the national income; and almost 13.5 per cent of the school age children are on farms in the Southeastern States, where the income of the farmers is only 2.25 per cent of the national total.

Other comparisons, of course, are possible. Rural housing conditions are inferior to those existing in cities, although some improvement is being made through the increased use of modern equipment. About 8.5 per cent of all farm homes, for example, have flush toilets as compared with 85 per cent of all urban homes; about 30 per cent have water in the house, including 8 per cent with piped cold water and 14 per cent with hand pumps, as compared with 85 per cent of urban homes with running water. Something over 25 per cent of the farm homes have electricity for lighting as compared with about 95 per cent of urban homes having modern lighting equipment.

Farm families do tend to have better diets than village or city families, owing to the use of such home-grown protective foods as fresh fruit, green vegetables, eggs, and milk. But even here there is still much to be desired. Dietary improvement is especially needed over wide areas in the South, the Appalachian Region, and the Great Plains, as well as among the families of the migratory farm workers on the Pacific Coast. A survey of the South in 1937 indicated that an additional 6,000,000 acres of cropland and 9,000,000 acres of pasture could well have been devoted to the production of additional home-grown food for farm family consumption.¹⁷

General Trends Affecting Agriculture. The agricultural situation is further intensified by the following three general trends which today pervade the American economy:

1. We are in the mass, farmers and city dwellers alike, demanding an increasingly urbanized way of life. This includes an increasing urbanization of rural standards of living and the natural insistence of farm people that they are entitled to the same modern conveniences as the rest of the popula-

¹⁶ The remainder of this section is based upon: O. V. Wells, "Agriculture Today: An Appraisal of the Agricultural Problem," "Farmers in a Changing World," *Yearbook of the U. S. Department of Agriculture* (Government Printing Office, 1940).

¹⁷ Steanson, Oscar, and E. L. Langsford, *Food, Feed, and Southern Farms: A study of production in relation to food needs in the South*, U. S. Department of Agriculture, Bureau of Agricultural Economics, Farm Management Report No. 1, November, 1939.

tion. Some of the forces contributing to this attitude include the increasing commercialization of agriculture, the radio, the movies, and the automobile, and the consolidated school.

2. As we move forward to this new way of life, the "in-between" or service, distributive, and general overhead functions are absorbing a steadily increasing portion of our total economic effort. So far as agriculture is concerned, this has resulted in the widening of what are otherwise relatively stable marketing margins, so that the greater part of the burden of declines in food and fiber prices is increasingly borne by the farm group.

3. Our entire economy is tending toward maturity; that is, rates of growth are slowing down, certain classes of new opportunities are becoming less frequent, interclass mobility is decreasing, and inflexible prices are becoming increasingly frequent, while the pressure of the population upon both the nonagricultural labor market and the land is being intensified. This does not mean that our economy is contracting, or that there are no more opportunities for further development. But it does mean that we are moving toward a stable population, that our economic and social problems are no longer those of a youthful nation, and that the role of government is becoming increasingly more important.¹⁸

All this means that farm people are developing an increasing volume of material desires at the same time that increasing service and distributive charges are creating an ever widening gap between the farmer and the consuming population, and that other forces are tending to stabilize our entire economy and fix relative incomes of the several groups in our population at about their current level. To farmers especially this is exceedingly important. For if their incomes are fixed at the current level, it simply means that they will have to continue to accept a standard of living which is not commensurate with their contributions to the national welfare. Farmers must find some way to offset or break down the ever increasing number of rigidities and inflexible prices which are developing in the nonagricultural field.

The current war and our own national defense program have introduced a number of new elements into the agricultural situation. The outlook for agricultural exports is especially unfavorable for the duration of the war, and it is by no means certain that the export market can be easily reclaimed after the war is ended. On the other hand, the expenditures for national defense which are now in prospect indicate an increasing industrial employment and an increasing domestic demand. As a result, it now appears

¹⁸ For an interesting discussion of some recent census facts concerning "a nation whose growth is slowing down," see: W. F. Ogburn, "The Changing Pattern of America," *New York Times Magazine*, October 13, 1940. Also see: Alvin H. Hansen, "Progress and Declining Population," *American Economic Review*, March, 1939; and Glenn E. McLaughlin and Ralph J. Watkins, "The Problem of Industrial Growth in a Mature Economy," *American Economic Review*, Supplement, March, 1939.

that the upward trend in farm population may be halted and that the demand for those agricultural commodities which are almost altogether consumed in the United States will be considerably improved. In addition, in a world disorganized by war, the national interest in the food supply and in the soil and people who produce it will necessarily be strengthened.

The war and the defense program, however, will solve none of agriculture's basic problems; rather it will further accentuate some of them, especially in the South. Farmers will be particularly interested in the methods which are used to finance the defense program; and it is generally recognized that the situation growing out of and following the end of the war and our own defense effort could well be as serious as that following the end of World War I.¹⁹

III

Considering the analyses set forth in Sections I and II, what are the agricultural problems with which the people of the nation should be concerned?

a) The continuing pressure of agricultural supplies upon the market and the continuing development of agricultural technology both indicate that the commercial farmers face a real problem of adjustment to the market situation; and since individual farmers themselves cannot solve the problem, it is clear that they must find some way of obtaining concerted action.

b) The degree of unemployment and underemployment existing in agriculture, together with the fact that approximately 50 per cent of the farm population accounts for only about 15 per cent of our agricultural production, clearly indicate that ways must be found for increasing the income or for improving the standard of living of farmers in the low-income group.

c) There are certain approaches which concern all farmers, whether in the low-income group or in the high-income group, which also should be considered. Farm standards of living can be raised indirectly by offering farmers modern conveniences and medical, educational, and transportation facilities at lower cost; and by encouraging them to conserve their soil in order that farming may be stabilized and the soil resources of the nation wisely handled.

These problems are not new, but the answers to them are affected by recent changes in emphasis and by new or developing institutions, just as these same answers are also conditioned by what has gone before, by old approaches and accepted custom. Some of us, of course, may feel that they are not, strictly speaking, economists' problems at all. But this is a view

¹⁹ For those interested in a further discussion of the effects of the current war and the defense program on agriculture, attention is called to some of the recent releases of the Bureau of Agricultural Economics, and to the session dealing with this subject scheduled for this same meeting by the American Farm Economic Association, which will be covered in the Proceedings Number, *Journal of Farm Economics*, February, 1941.

that has been too long accepted and one which needs to be changed.²⁰

Commercial Farming and the Agricultural Program. For almost two decades, attention has been focused upon the problems of the commercial farmers, upon that half of our farm structure which accounts for the great bulk of the agricultural commodities that actually move to market. As a result, a rather inclusive program has finally been developed. It includes a wide-flung agricultural credit system; the agricultural conservation, commodity loan, crop insurance, and marketing quota devices which add up to the "ever-normal granary" program; and an increasingly important marketing program, including marketing agreements and a wide range of approaches designed to increase domestic consumption or encourage foreign trade; as well as a wide and varied range of activities concerned with research and with the collection, analysis, and dissemination of economic information.

We may briefly consider the future of acreage and marketing control, commodity loans, and price adjustment payments as they apply to the basic commodities; that is, commodities which supply the greater portion of the cash farm income, especially corn, cotton, wheat, tobacco, and live-stock. Our ability to produce these commodities easily in quantities equal to or in excess of domestic and foreign requirements clearly indicates that adjustment or price-fixing or stabilizing efforts may be expected to continue, although the successes achieved may not always be entirely satisfactory even to those who are most directly benefited.²¹

²⁰ Economics should be more than the study of scientific logic or the mechanics of the market. Alfred Marshall was willing to admit that economics is in part the "study of mankind" and that the lessening of poverty is the essential question with which economists should be concerned. And we are all aware, of course, that the institutional economists who follow John R. Commons are more than ready to attack problems involving social judgment. T. W. Schultz, in the other main paper for this session, indicates that economists have tended to concentrate upon the economics of "resource allocation" with too little attention to the economics of "income allocation." The author is in complete agreement with this aspect of Schultz's argument.

²¹ A considerable number of economists are increasingly inclined to argue that the efforts of the Agricultural Adjustment Administration to control acreage and production have not been successful.

I do not want to argue this point here, but I think it should be pointed out that the agricultural adjustment and conservation programs were not originally and are not now designed simply to reduce production or to hold land out of cultivation. Rather the effort has been to divert land from more intensive to less intensive uses and to encourage conservation. This effort has also been associated with supplementary devices designed to increase farm income through changing certain marketing conditions and through the making of direct payments to farmers by the government. On the whole, it can well be argued that the effort has been as successful as could be expected if allowance is made for the fact that the problems attacked were extremely difficult, and that there are few fields of endeavor in this country in which the collective efforts of either individual businessmen or government can be accounted completely successful. Certainly, where the need for control has been most acute, as for example, in cotton, or even more specifically, in the case of flue-cured tobacco in 1939, the result seems to me to be remarkably good. That agricultural conservation will, over the long run, increase yields is admitted, and the very people who are most critical of the success of the control devices are also often the ones who most applaud the efforts of the program to encourage conservation and good farm management. The real difficulties, of course, are that the economists and the businessmen generally have not as yet found a way to increase domestic consumption materially and that we have been faced with a continually contracting foreign market.

After all, such programs are essentially equalizing devices designed to give farmers the same advantage that labor receives through organization and that is attained in business through concentration, financial control, and its structural capacity for allowing costs to be cut by reducing production when the demand situation is depressed.²² Although attention is currently being shifted toward price maintenance and increasing consumption, the efforts to maintain prices at a reasonable cost are almost equally certain to continue to drive attention back toward acreage and marketing adjustment.

At present, and to an increasing extent in the future, I suspect, attention is being directed toward efforts to increase the consumption of agricultural products through such devices as surplus purchase and distribution, the food and cotton stamp programs, and a relatively wide range of devices designed to encourage the development of new uses for agricultural commodities, including chemical and technological research. We are also, of course, endeavoring to expand the foreign market; and this effort was meeting with some success prior to the opening of World War II, as the result both of occasional subsidies to lower the cost to foreign consumers and of the Reciprocal Trade Agreements Program. Certainly, it seems desirable to continue this endeavor to increase consumption and the demand for agricultural products generally. Increasing emphasis is also being placed on the need for better health and nutrition simply as a matter of continuing national defense, even aside from its relation to the agricultural program.

Efforts to develop remedial market policies should also be continued. In this field, of course, farmers feel that inflexible marketing charges are unfair, and commodity speculation especially has long been a traditional devil. Speculation is now regulated, but we still find ourselves increasingly concerned over market reform and improvement. It must be remembered, however, that marketing costs are chiefly compounded on wage rates, transportation charges, and the physical efficiency of the marketing system itself. In an economic world tending toward increasing organization and increasingly dominated by arguments for security and stability, the chances of material declines in wage rates are at least doubtful. So the fight for marketing improvement will continue, but spectacular progress is not to be expected.²³

Credit policy with respect to agriculture will continue to be important. In part, changes in this field will be in terms of co-ordinating the commercial types of credit which have developed through the last quarter century

²² For a further discussion along this line see: H. C. Taylor, "The Farmer in the Groupistic Regime," *Journal of Land and Public Utility Economics*, August, 1940.

²³ For some recent work in this field see: *Barriers to Internal Trade in Farm Products*, and *The Wholesale Fruit and Vegetable Markets of New York City*, special reports of the U. S. Department of Agriculture (Government Printing Office, March, 1939, and April, 1940).

with other agricultural policies affecting commercial farming; and in part the modifications will be in the direction of further developing the credit field now occupied by the Farm Security Administration. All loaning agencies seem to be showing an increasing interest in farm planning and in supplying some technical supervision to those clients most in need of help.

So much for policies concerned with commercial agriculture—not that they will not continue to be as important as other classes of policies, but rather that they are policies around which controversy has centered for two decades, with the result that the stream is perhaps already reasonably well defined, except for those shifts in emphasis and changes in method which are continually being dictated by the exigencies of the moment and which can rarely be forecast.

An Agricultural Program for the Low-Income Group. A second great stream of agricultural policy has to do with the great mass of disadvantaged farmers and farm people and the problems which are primarily associated with them.

These are the people who are least articulate, and whose problems are often least well understood or least appreciated. These are the farmers, and they account for one-quarter to one-third of all the farm people in the United States, who are least well organized and who must most often depend upon the social conscience of others for support and advancement. And yet it seems necessary to say that it is the policies dealing with the problems of these disadvantaged classes which are most likely to break new ground in the decade ahead.

First of all, we may expect the programs for commercial agriculture to be bent or altered in such a manner as to give somewhat greater recognition to the small grower on the family-sized farm and greater security to certain classes of farmers whose operating risks are relatively high. This means increasing attention in the form of allotments, exemptions, and bonuses to the small operators and family-sized farms, and efforts to extend crop insurance to crops other than wheat.

Second, we may expect a modification of some of our existing ideas with respect to conservation as it becomes increasingly apparent that land available to many farmers is limited and that such farmers must usually obtain conservation through the use of certain practices rather than through the shift from soil-depleting to soil-conserving crops about which we have talked so much.

Third, the continuing attention directed toward tenancy and the recitation of the evils of tenancy should gradually work toward the evolution of an intelligent tenant policy. Traditionally, of course, we all cherish the ideal of an unbroken agricultural ladder—of the farm boy starting as a laborer, working through several stages of tenancy and part ownership, and finally ending as a full owner. This ideal will persist and with it the

effort to obtain increasing sums to finance a tenant purchase program.

But it is also desirable to recognize that tenancy is not necessarily always, or even ordinarily, an unmixed evil. The conditions of the three million American farmers who are now tenants or sharecroppers cannot be appreciably improved through an ownership program alone. What is needed is an intelligent and sustained drive for improving and stabilizing landlord-tenant relationships, accompanied by the success of some other programs in the agricultural field. The general opening up of opportunities for industrial employment would also help.

Fourth, unless there is a marked and sustained expansion of commercial and industrial employment in this country, the problem of a rational rural relief policy must be solved. So far, rural life has depended upon a not too well integrated combination of rural relief, of jobs in the Civilian Conservation Corps and the Works Progress Administration, of feed and seed loans, and of grants administered by the Farm Security Administration. Increasingly it appears that we need to develop a well thought out relief program which can be thrown in and out of gear as needed. The most substantial item in such a program could well be an intelligent rural conservation works program which would both give employment to rural people who were temporarily without other means of livelihood or who were usually underemployed, while at the same time making the several communities better places within which to live and work.

Fifth, the rural rehabilitation program or its equivalent will need to be continued. This is another field in which some reorientation is needed. Further developments may include new ways of combining loans and outright grants of aid, still with rehabilitation as the end in view, and new techniques for fitting operating plans to the farm and the individual. The question will also be raised as to what extent acreage allotments and payments should be diverted to the low-income or disadvantaged farm classes in order to provide a wider economic basis for their support.

For many farm families, however, the extra land and markets necessary to supply a decent level of employment or even a minimum standard of living, measured in American terms, cannot be found through a strictly commercial approach. Hence, increasing attention must be devoted to finding new ways of agricultural life or enough supplementary income to give such farm people a chance to continue to function as a part of the American system.

This means the further development of part-time, subsistence, and semi-co-operative farming. Part-time farming is already an established fact. An increasing number of farm people living close to cities and towns already have sources of income that are partly agricultural and partly nonagricultural. If the spread of industry into rural areas could be stimulated, then such farming might become a far more effective cushion against economic

shocks for many people than what is often a system of only occasional full-time industrial employment.

Subsistence farming and an increasing number of small-scale farms already exist. Although subsistence farming of the old type is no longer significant, a type of small-scale farming designed to make use of technological advances, of community planning, and of new avenues to some supplementary income—such a development may well offer promise to many farm families that cannot now see their way out, and might also be developed without departing too far from the tradition of the family-sized farm.

Co-operative loans for equipment and the organization of farmers into medical associations and self-help groups also seem to offer some promise for further development. Perhaps the most interesting discoveries growing out of such work as has been done in this field to date have to do with the effect of co-operative activity upon the people themselves and upon the community spirit. Farmers are learning to work together, and it becomes increasingly clear that they must continue to work together if their social and economic ends are to be successfully achieved.

The development of new ways of agricultural life will involve many experiments if solutions are really found. Perhaps these new "ways of agricultural life" will never be entirely satisfactory and stable because of the constant moving of young people back toward farming on a commercial scale or into full-time industrial or commercial employment, but subsistence farming and an increasing number of attempts at part-time farming are being tried. And these should be encouraged, for other types of farming are likewise unstable, and if an over-all agricultural policy is to be developed which can truly be designated as good, it must meet the needs of every group in the agricultural population.²⁴

Sixth, the farm labor situation offers perhaps the most difficult problem in the entire agricultural field. Wages are usually low; and, equally important, an increasing number of farm laborers find it difficult to obtain any kind of work. Unless this situation is improved the prospect is that agricultural laborers will present a problem distinct from that of the rest of the agricultural group. The agricultural ladder by which they formerly climbed to ownership has been shattered since World War I. There will be a demand for wage and hour legislation relating to many of the agricultural laborers who are exempt under the current legislation, unless enough of these workers can find nonagricultural employment to relieve the situation. There is already a demand that the state and federal governments see that migrant workers are given a decent place in which to live

²⁴ With respect to this particular aspect of the subject, attention is called to the section by M. L. Wilson in: *Agriculture in Modern Life*, by O. E. Baker, Ralph Borsodi, and M. L. Wilson (New York: Harper and Brothers, 1939). Also see: Leonard A. Salter, Jr., and Larry F. Diehl, "Part-time Farming Research," *Journal of Farm Economics*, August, 1940.

or at least camp, and that their children be given adequate educational opportunities and medical attention.

A number of observers seem to feel that the efforts of commercial producers to stabilize marketing and encourage adjustment are necessarily in conflict with the attempts to develop a program which will better the conditions of the low-income or disadvantaged and underprivileged farm group. On the surface, of course, there is a conflict; but the conflict is more seeming than real since both efforts must succeed if either one is to be successful; that is, we must agree with M. L. Wilson in this statement:

The solution, as I see it, lies in combining the best of the new with the most enduring of the old. . . . Otherwise democracy cannot survive, and violent clashes of interest and ideologies will follow. . . . The folklore of the self-sufficing culture does not apply to the new world of specialization and interdependence. The environments are almost complete opposites. The abruptness of the transition is fundamentally responsible for the greatest social tragedies of this age. The task of today is one of compromise and qualification. Our future now lies . . . in combining *some* dependent specialization with *some* individual responsibility, in joining *some* group and co-operative activity with *some* personal self-sufficiency. This will give mankind a chance to assimilate culturally the great mass of novelty that science and technology have already created.²²

Some General Approaches to Agricultural Improvement. There are a number of general approaches which need further attention if rural standards of living are really to be improved. Efforts should be made to see that the benefits of laborsaving devices are made available to farm people, that rural settlement is stabilized, and that the values of rural living itself are more generally recognized.

Technical devices need to be adopted or developed which will lighten the burden of farm labor and make rural life more attractive, or at least make the technical facilities available to farm people more nearly comparable to those available to the urban group. One of the most spectacular developments in this field is the steady increase in the number of farms using electricity as a result of the program of the Rural Electrification Administration.

Although attention is usually focused on electricity as a source of light, there is an increased amount of electricity used on the farm for other purposes, and the possibilities of further developments in this field appear good. This leads to another development to which increasing attention should be given; that is, the development of machines and techniques that will extend the benefits of technology to the farm home or to the small farm operating unit. It seems that engineering research could be pointed

²² M. L. Wilson, *ibid.*, p. 266. Wilson has elsewhere observed that "the low-income and poverty stricken people are not now a pressure group, neither are they a vocal group in agriculture. What is going to be done both outside the government and by the government will be done as the result of public opinion and social responsibility. . . . There is sufficient public interest in the problem . . . to sustain an intensive national discussion which, I hope, will result in some new activities—new steps forward." M. L. Wilson, "The Problem of Poverty in Agriculture," *Journal of Farm Economics*, Proceedings Number, February, 1940.

toward the development of farm-home or small-scale equipment as well as toward the hunt for better large-scale equipment.

Activities designed to develop a more continuous rural culture and to stabilize rural settlement should be encouraged. An outstanding effort in this field is that to encourage soil and forest conservation. In the past we felt that our supply of land was almost unlimited. Today we are increasingly coming to the realization that our soil resources are no longer unlimited and that the consequences of continued exploitation are not to be desired. The conservation of our farm and forest land should do a great deal to cut down internal rural migration, to encourage the development of better rural facilities, and to insure the continuing production of food and fiber for the entire population of the American nation.

Attention should be given to the need for better rural facilities in the form of roads, of rural schools which are better adapted to the conditions of modern life, and to the development of rural community centers so as to allow farm people to work better together.

Finally, our basic attitudes toward rural life need to be re-examined. Such a development would call for a reorganization of a great deal of the thinking of almost all classes of our population. In the end, rural young people should be interested not only in the material comforts of life but they should also derive satisfaction from the fact that they are themselves contributing to the growth and maintenance of our American civilization. This, however, cannot be done by inspiration alone; farmers must also be given the chance to earn a reasonable income if the rural horizon is to be widened and if security and conservation are actually to be achieved.

In conclusion, I realize that a considerable part of this discussion, especially in Section III, is open to question, since it is based very much upon opinion and too little upon concrete research.²⁰

This suggests, however, that what is needed is not an apology for considering the questions involved, but rather that as researchers and analysts we should endeavor to see that our studies are expanded to cover those fields with which we should be so vitally concerned. In the past, certainly, we have concentrated attention upon the conditions and problems facing the commercial farmers and have given far too little attention to the low-income group and to rural ways and standards of living as such.

We could enter into an interminable discussion as to whether we should endeavor to solve our business or our agricultural problems first. Such a

²⁰ A more extended discussion of the subjects covered in Section III will be found in the author's article, "Some Essentials of a Good Agricultural Policy," "Farmers in a Changing World," *Yearbook of the U. S. Department of Agriculture* (Government Printing Office, 1940). For a different approach to the agricultural problem, by an economist whose sympathies are on the whole different from those of the author of this article, the reader is referred to Joseph S. Davis, *On Agricultural Policy, 1926-1938*, Food Research Institute, Stanford University, California, 1939.

discussion would advance us very little, since our real interest is in seeing that both are solved, and since we are all aware that we must move forward step by step in either field as the opportunity is presented.

There are, however, two final questions which are often raised in one form or another: If agriculture is to be aided by governmental action, what will replace "sheer economic necessity" in forcing adaptation and adjustment; and, when can the "subsidies" which are now being used be dispensed with?²⁷

These questions are difficult, of course, but it seems to me that the answer will be found in the fact that adaptation to conditions such as farmers currently face will continue to be brought about in part through sheer economic necessity, since governmental action does not now more than partially absorb or delay the shock of declining markets or changes in demand. In part, we must endeavor to obtain the adaptation through the development of a democratic planning machinery which will allow farmers to see their problems as they actually exist and to devise for themselves ways and means of meeting them. There is, of course, a wide range of activities already going on within this planning field.

And to some extent at least the answer is to be found in John Stuart Mill's original dictum that the distribution of wealth is, after all, a man-made affair. To the social analyst who is willing to distinguish between results and mechanics, it seems reasonable to conclude that certain groups in our society have long been receiving concealed subsidies which are equivalent to, if not considerably in excess of, those now being received by the farm population. Either the farmers must command a bargaining power equal to that of other groups in the economy or ways must be found for restraining the pressures which these other groups are exerting on our social and economic organization.

Finally, we must reiterate the national interest in agriculture—in seeing that farmers receive incomes which will encourage soil conservation and assure a continuing supply of food and fiber, and which will provide farm people with modern conveniences and the other essentials of a decent standard of living. So long as there are millions of workers in agriculture who are unemployed or underemployed, we will have agricultural distress, and the burden will be transferred to the general public through competition for jobs and through agitation for agricultural relief. Surely, what we want is to work out ways and means by which the people of this generation may lead a better life, in order that the human and natural resources from which the life of the future will be built may be conserved and enriched.

²⁷ These questions were suggested by Frederick C. Mills in commenting upon the outline for this paper. They continually recur in discussions of the agricultural situation.

ECONOMIC EFFECTS OF AGRICULTURAL PROGRAMS¹

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Agriculture has come to require a good deal of attention in national housekeeping, a drift which has been world-wide in its scope, including both food deficit and surplus countries. Agriculture has been less successful than most other major sectors of the economy in coping with the rapid changes which came after the other World War. Notwithstanding the fact that agriculture has approximated more closely the classical ideal of open and free enterprise, it has not shown capacity to adjust itself. The troublesome twenties favored finance, industry, and labor, at least, with the illusion of well-being, while dwindling farm income and equity, the potion which was put to the lips of farmers, was bitter as gall. This drift toward more public housekeeping on behalf of agriculture set in soon after 1919. It passed through the stages of advice, assistance, and action. Not that there occurred at any one time a sharp break with the past, not even in 1933 when the New Deal came into command. The Federal Farm Board with its bold action program had just run its course.

Several features about public policies pertaining to agriculture are becoming increasingly plain. These economic policies are no longer passive. They cannot be described as primarily concerned with improving those rules of the game which would make a free enterprise economy freer. Nor are the difficulties that beset agriculture for which active policies have been invoked chiefly emergency in character. The notion of surpluses, droughts, floods, and relief may still be the popular notion of the nature of the farm problem but these would hardly stand as an adequate diagnosis. Instead of emergency policies, the turn has been sharply toward active, continuing, administrative controls. This has led to the development of a vast federal administrative organization and personnel with large federal appropriations at its disposal.

While there is increasing agreement that the economic affairs in agriculture do not run themselves and would not if they were left to do so, there are nevertheless many who would prefer to let the some six million farmers much more alone than has been the case in recent years. One of the major purposes of this paper is to set up criteria for ascertaining the economic effects of the action programs and administrative machinery vested in the United States Department of Agriculture, and assess the results to date. In a broader sense, the constellation of economic realities con-

¹ Reprints of this paper are filed as J-807 of the Iowa Agricultural Experiment Station, Iowa State College, Ames, Iowa.

In the formulation of this analysis I have benefited from the criticisms and suggestions made by my colleagues, A. G. Hart, L. G. Allbaugh, A. Kozicki, J. A. Hopkins, A. C. Bunce, C. M. Elkinton, R. Schickele, M. G. Reid, and W. W. Wilcox.

fronting the United States is such that we are likely to have more rather than less public management. There is no mistaking the handwriting as we mobilize for national defense, for clearly and of necessity more controls are being vested and centralized in government. Nor is that all; if it were, we might presume that this drift was essentially temporary. There are many signs, aside from defense, which indicate that more public management is ahead for agriculture. The further disintegration of international trade points in that direction. Until quite recently agricultural policies were based on the presupposition that the trade agreement program would re-establish foreign trade sufficiently to provide substantial market outlets abroad. But all this is now largely in abeyance. The prospects of the export trade returning to levels such as prevailed even during the twenties is now as remote as it is for investment practices to return to the normalcy of the Coolidge era. Past expectations must be discarded and new ones formulated. It may well be that the United States will be forced to establish much more control over its foreign trade than hitherto. This step alone would necessitate many more administrative controls with regard to the internal economy and especially that of agriculture.

Quite regardless, however, of the direction of this over-all drift in government control, the agricultural policies and programs which have been developed demand critical examination. They are here. They are a going concern. They consist of a whole series of federal administrative techniques designed to attain what are presumably economic goals. It is, therefore, appropriate to start by examining the functions of these administrative techniques in relation to the problems within agriculture and, further, to inquire as to the probable effectiveness of these and alternative means, both public and private.

Distinction Between the Resource and the Income Problem

To obtain a comprehensive view of pertinent agricultural affairs and going policies, it is necessary to sacrifice detail and considerable specific content at this stage. To gain generality, we start by classifying the agricultural problems of economic import which are continually present into two major groups: (1) The problem of the best allocation of resources, for which the necessary analytical procedures are well known; (2) the problem of the best allocation of income, not to be confused with the functional distribution of income which results from the flow of rewards to resources in the form of interest, rent, and wages paid to those individuals who possess the resources.² The principles that are necessary to solve this problem are less well developed.

² The concrete manifestations of public allocation of income may be in the form of "free" education, health services, school lunches, supplementary food to improve diets, vocational training, managerial advice, assistance in migration, old age assistances, and pensions, to suggest only a few.

Neither the resource nor the income problem as formulated above is peculiar to agriculture. Both are as fundamental to the economy of mining, transportation, professional services, et cetera, as they are to agriculture. What is important, however, is a clear understanding of the bases and the fundamental nature of the dichotomy which separates them. It will be one of the major purposes of this paper to demonstrate that the differences between the two categories of problems are basic and real not only for purposes of analysis but in the formulation of more rational agricultural policies and programs.

Because many of the more important limitations of present agricultural programs, as will be shown subsequently, are directly ascribable to the fact that there has been no clear-cut differentiation between the problem of allocating resources and of allocating income, it is necessary to establish the significance of this distinction. There is a deep-seated disposition on the part of both citizens and public servants, and of farmers and members of the administrative and policy-formulating personnel of the United States Department of Agriculture in particular, to look upon the economics of resource use and of income allocation as one and the same problem. What happens when this is done is that either one or the other of the following two extreme approaches usually results: (1) It is supposed that when the economic system is made to operate at "full" capacity, automatically and simultaneously the allocation of income to individuals and families in society will be solved; or (2) that in order to increase the income of those individuals and families with inadequate income it is necessary to raise the rate of payment to the resources which such individuals have to contribute to economic production. It should not be necessary to demonstrate the falsity of either of these two positions. On the one hand, it is all too apparent that the productive resources which many families, both in and out of agriculture, possess are too few and their productivity too small to earn for the families concerned an adequate income even when used at an optimum rate; and on the other hand, to enforce a price for any given resource which is higher than the value of its marginal productivity is to cause some of those resources to become unemployed. I hasten to add that economic experts are all too prone to concentrate all of their attention on the first category of these two sets of problems (that of the allocation of resources), quite to the neglect of the other. One cannot help wondering if there is not an implicit belief lurking in their unexplored "moral" presuppositions that somehow the allocation of income among individual members or families of society takes care of itself through the rewards which are paid to the owners of resources for their contribution to production.³

³ Notably there are the writings of Professor J. B. Clark which have occasioned Professor Knight to remark: "More important, however, is the error of attributing any sort of moral significance to economic productivity. It is a physical, mechanical attribute, attaching to inanimate objects quite as properly as to persons, and to non-moral or even

Complementariness of Objectives

The agricultural programs of the federal government are in most instances trying to effectuate both a better use of resources and a better allocation of income. These two objectives are in some cases highly complementary to each other; and accordingly by attaining the first, a good deal is accomplished for the second.⁴ In several important cases, however, these two ends are to a large extent inconsistent with each other. This simply means that as steps are taken to bring about an optimum use of agricultural resources, the income of farm people actually declines. It is at this juncture that "practical" policies become oriented towards the task of altering the rates of return paid for the service of agricultural resources in an endeavor to better farm income. The result is, of course, that resources become misused. It is this latter point on which I wish to focus attention. It is inherent in several of the leading features of crop production control, farm commodity loans and storage, soil conservation, and marketing agreements. Here we have, then, the compounding of the two problems which makes it essential for us to establish, first of all, the basic conditions which underlie the dichotomy which has been laid down. A treatment of these follows.

The necessary theoretical tools for analyzing what we have classified as the resource and the income problems are drawn from two wholly different sets of principles. The criteria for determining the best use of given resources are implicit in the principle of marginalism,⁵ while the criteria for ascertaining the best allocation of income are inherent in considerations of general welfare. The schemes of analysis which pertain to the first are fairly well developed. These tools have undergone much refinement and they provide us with some of the best instruments available for understanding and solving economic problems. What is important is that they have been designed to solve the resource problem and that they are based on marginal analysis. Much less, however, has been done in developing an analytical framework for understanding the income problem, and the task of determining the claims of social justice, although recent work in this field has pushed back the frontier substantially. The institutional organization for doing one of these tasks has been predominantly private, whereas

immoral as well as virtuous activities of the latter. The confusion of causality with desert is an inexcusable blunder for which the bourgeois psychology of modern society is perhaps ultimately to blame, though productivity theorists are not guiltless." *Risk, Uncertainty and Profit*, p. 179.

⁴For example, steps which help farm people to migrate from overcrowded sections to areas with better economic opportunities are of this type.

⁵"Economic theory is concerned only with the allocative aspect of economic behavior. Its entire argument comes under the single 'economic principle' that the total result is maximized through allocating means among alternative channels of use (each subject to a law of diminishing effectiveness) in such a way that equal increments of means yield equal increments of ends in all modes of use." Frank Knight in the *American Economic Review*, XXIV, June, 1934, 228.

to do the other, it must of necessity be essentially public in nature. It is plain that in the United States the administrative machinery for getting resources into operation has been primarily a private function done on farms, in workshops, small businesses, and giant corporations. But it is not easy to conceive of administrative machinery designed to cope and act in the field of allocating income which is not public in character. Underlying our institutional development is the widespread belief in the efficacy of free enterprise, which has of course greatly conditioned the development of the rules of business conduct and of legal and political institutions pertaining to production, trade, and commerce, while democracy, with its sharp accent on equality, has gradually come to pave the way for public action by taking cognizance of the income problem.

No one would deny the fact that within agriculture there are many families who earn wholly inadequate incomes measured by any reasonable criteria of social welfare. Many farmers are poor people. Most of them are "little men and women" with few resources outside of their own labor to contribute to economic production. Professor J. D. Black, reviewing the agricultural situation of March, 1940, wrote:

... the case is clear that the incomes of a fraction of the farm population are distressingly low. Two-fifths of the chief farm families of the nation do not have incomes of \$780 . . . in terms of urban dollars buying power. . . . And within this limit are large blocks of farm people, in many places well concentrated, as in much of the South, who are living for the most part on incomes of less than half a thousand.⁶

Furthermore, given full employment for the economy generally and the measurably improved prosperity that this would bring, there still would be many families in agriculture, as well as in other occupations, who would not earn enough to give them an adequate income. The point is simply this: the problem of allocating income which confronts modern society will be appreciably reduced but not solved by getting the economic machinery into full gear. Or, to take a more restricted view, even when all of the kinks have been removed from agricultural production, thus reducing to a minimum production maladjustments, many of which are now of long standing, there will continue to exist within agriculture the unsolved problem of income allocation. This is not to minimize the importance of shaking the stagnation to which our economy has fallen victim and from which we are now being rescued by our efforts at national defense.

Productivity and Income

Why is it that most farmers and many farm leaders believe that the way to correct the low income of farm people is to make adjustments in produc-

⁶ *Review of Economic Statistics*, May, 1940, pp. 69-70; cf. also National Resources Committee Study, *Consumers Income in the United States*, 1938.

tion, in marketing, and in credit? The reason is simply this: There exists a deep-seated, genuine belief that a more efficient use of agricultural resources will in fact increase farm incomes, closely coupled with the conviction firmly held that each farm family should earn enough for its living. Here we have the horns of the dilemma which confronts government in most considerations pertaining to economic policy, for this situation is not peculiar to agriculture but is equally applicable to matters in labor, finance, and industry.

No one who is at all close to the daily thoughts of people can be unaware of their strong conviction that an individual or family should earn enough to provide an adequate income. This notion has long had general social sanction. It is deeply imbedded in our standards of ethical values. It is out of this conviction that there has arisen the idea of a fair price, which, if it means anything, is simply that rate of payment which is sufficient to provide the recipient with an adequate income.⁷ No one, I believe, would be disposed to argue that this notion of a fair price is based on the criteria which are necessary to facilitate an optimum allocation of resources. Furthermore, it is clear that this concept of a fair price holds whether it arises in a case of wages, prices of nonfarm products (page the old NRA!), or in interest rates. Here we have, if you please, the matrix out of which was born the notion of parity price in agriculture. Parity price, too, is a variation of the notion of a fair price, meaning simply a rate of return in terms of the price of cotton, wheat, corn, and tobacco which will provide farm families an adequate income.⁸ Who is there that would contend that parity prices have been formulated with a view to facilitate the best use of agricultural resources?

Because parity prices were designed primarily with an eye to adequate income rather than to an improvement in the use of resources within agriculture, it is of course easy to condemn them as misleading criteria on which to stake economic policy, as in fact they are. But to stop at this point is not enough. Account must be taken of the fact that fundamentally parity prices are merely a special case of the much larger class of so-called "fair prices," which in turn are sanctioned in what is approved social conduct. Farmers and the pressure groups representing farmers are pressing their political case for what they consider fair prices, meaning thereby the right to "earn" an adequate income. To lose sight of this institutional background in appraising the policies that have been formulated by the government is to miss rather completely what is fundamental in any attempt to work out more

⁷ The notion of adequate income is probably best conceived as having both a subjective and objective phase. To the individual it is subjective with expectations rooted mainly in past standards of living while to a community or society it may be objectively ascertained in terms of nutrition, health, education, and other criteria of social welfare.

⁸ Meaning enough income to maintain the standard of living to which they are accustomed, which is the subjective connotation.

rational agricultural programs. We simply must start with the fact that much of the basic legislation which has been formulated to promote the welfare of agriculture reflects this deep-seated desire of farmers to earn an adequate income, hoping of course that at the same time these measures will help correct the bad allocations of agricultural resources that exist.

Because it is repugnant to people's sense of right and wrong not to be able to earn one's way in terms of economic productivity, the resistance to any separation of the resource and income problems becomes quite understandable. Nevertheless, the fact remains that analytically the two problems must be kept separate; to treat them otherwise can only lead to confusion. Moreover, as long as the two objectives are linked in the formulation and promulgation of policies, the results of such policies will, in the main, be unsatisfactory. It is fairly evident already that schemes which do not make the separation are likely to do more harm in upsetting the use of resources than they could possibly contribute in their income features. Accordingly, therefore, the necessity does present itself of finding ways and means of designing on the one hand programs which are directed to the problems of production, marketing, and credit, and another set of programs which aim at supplementing the income of farm families deemed to be too low,⁹ if a more rational approach is to be made in dealing with the affairs of agriculture.

After outlining briefly the major sources of economic disequilibria impinging on agriculture, we will turn to a consideration of specific agricultural programs and at that point examine specifically those difficulties which have arisen as a result of not separating the income and resource objectives.

Disequilibria Pertaining to Agriculture

Before going further it is necessary to touch briefly on the particular circumstances which account for the economic disequilibria which confront agriculture. The more important of these follow.

The per capita income of farm people is affected adversely continuously by the persistently wide differentials in population growth between farm and nonfarm people.¹⁰ These differentials in population growth are a source of important chronic maladjustments in the use of both human and material resources, between agriculture and other parts of the economy. While there was less awareness of the presence of this disturbing dynamic factor in earlier decades when rapid expansion in industry facilitated migration out of agriculture, nevertheless the economic effects were at hand. It has been the principal factor which has caused human resources employed in agricul-

⁹ In terms of social welfare criteria.

¹⁰ The paper by Howard Tolley, Chief of the Bureau of Agricultural Economics, appearing in this session treats in considerable detail the population problem in agriculture; accordingly only the barest reference is made here to this important aspect of the agriculture.

ture to be priced increasingly at a discount relative to wages in other lines of work. Moreover, because most of what farm people contribute to production is in the last analysis labor, fairly unskilled labor, and since they possess little equity in the capital which is used in agriculture, the adverse pressure upon rewards for farm labor has depressed substantially the income which farm people earn.¹¹

Young men and women are one surplus farm crop which the rest of society not only continues to get free, but, because agriculture is continuously confronted with a surplus population, this situation operates to cheapen labor as a cost item within agriculture; and as a consequence the rest of us obtain our food and fiber at lower prices than would otherwise be the case. The economic disequilibria which have their source in the differentials in population growth pervade virtually all phases of agriculture.

Because there is no provision in the existing price mechanism for paying families for the capital inputs which they invest in bearing, rearing, and educating children, a perfectly good economic case may be made for developing some basis for compensation for these capital costs. In principle the whole matter could be put on a strictly economic footing. This would give agriculture a very considerable claim to additional income which it earns in a rigorous cost of production sense. This line of reasoning is submitted largely to allay the misgivings of those who prefer to avoid tackling the problem of income allocation because they are uncertain of the ground that this would get them onto. If one is apprehensive of social welfare criteria,¹² he has in the case of the population factor a very important consideration in which supplementary income might well be meted out along economic lines which would very materially add to the incomes of the very families now receiving the lowest incomes. However, a better way is to approach this problem in social welfare in terms of food, nutrition, health, and education and ascertain the value of each of these to society as a whole, which certainly does not rule out economic effects; quite the contrary, it places them in such a position that it is possible to decide whether or not to invest more or less in these items.

The balances within agriculture have been upset substantially by the contraction in the size of the market of cotton, wheat, tobacco, and also other farm products. The whole mental horizon of American farmers (also of economists!) had been one of expansion. The edicts of the Master on

¹¹ See John D. Black's discussion of farm income, pp. 57-59, in his recent article, "The Agricultural Situation, March, 1940," *Review of Economic Studies*, May, 1940. Professor Black points out that: "Perhaps a million farm people, youths mostly who would have moved to the city . . . did not do so. And since then, there has been no offsetting acceleration of movement such as occurred in 1921-26. This surplus has contributed to maintaining low farm incomes as well as wages; it has played a large part in the increase in the number of small and part-time farms since 1930."

¹² See the exceedingly provocative lectures on population policy by Gunnar Myrdal, *Population* (Harvard University Press, 1940).

the gain from the division of labor made possible by an increase in the size of the market have often received homage, for out of expansion came increasing returns and economic progress.¹³ In agriculture for at least two decades the story has been one of shrinking markets. While domestic outlets for certain farm products have continued to expand because of population growth and rising standards of consumption, several major agricultural regions had developed their resources with an eye to world markets. Their retreat in the face of the disintegration of world commerce has in many ways overshadowed the agriculture of several important regions of this country. It has been one of the main sources of disequilibria within agriculture and between agriculture and the rest of the economy. Moreover, the probabilities are increasing that even less is to be expected in the way of outlets for American farm products abroad.

A third source of economic disequilibria pertaining to agriculture has its origin in the vagaries of nature on which agricultural production is so largely dependent. Drought and dust storms, floods and frost are symbols of the more dramatic incidences in the struggle that goes on in farming, between man and nature. The resources which farmers use are not amenable to the same nice control as they are in factory production. Out of these vagaries there come to agriculture many forms of economic risk and uncertainty. These beset farmers in several ways. The effects are as yet only vaguely understood. Both the crop insurance and storage programs are directed toward the solution of certain phases of these difficulties. The major maladjustments of the Great Plains have arisen in large part out of the uncertainties of nature as a productive agent.

Advances in applied technology is one of the most potent dynamic elements in modern agriculture. It is leaving a veritable host of maladjustments in its trail.¹⁴

Partly as a result of inertia and lack of technical knowledge but probably more largely because of inadequate incomes, many farm families in agriculture are engaging in farming practices which disinvest soil resource capital more than the dictates of commodity prices, interest rates, and known technology warrant. The real soil conservation problem arises largely out of the income problem much more so than is generally understood.

There are other sources of disequilibria which fall primarily within the province of agriculture. Most of these are more specialized and restricted in their effects, however. Disequilibria having their origins primarily outside of agriculture are fairly numerous. Some of them have direct repercussions upon agriculture which are more significant to the agricultural situation than those considered. There are, for instance, the faults in the

¹³ Allyn A. Young, "Increasing Returns and Economic Progress," *Economic Journal*, Vol. 38, 1928.

¹⁴ See a recent United States Department of Agriculture monograph, *Technology on the Farm*.

general price mechanism; it no longer appears to provide adequate indices of relative values. The efforts of Mr. Thurman Arnold to enforce the rules of free and open competition have direct significance to agriculture. Nor is unemployment to be considered of minor importance. The broad considerations underlying fiscal and monetary policy aimed at fuller employment of resources are of major import.

This, however, must suffice as a general backdrop. Keeping in mind the differences between the problem of getting our resources employed effectively and that of allocating income adequately, and also the more fundamental causes of economic disequilibria pertaining to agriculture, we proceed to an examination of the more specific features of the present agricultural programs. I plan to indicate briefly the nature of the administrative techniques which the United States Department of Agriculture employs and to examine the economic effects which these procedures have occasioned.

Crop Production Control

While crop production control schemes are a fairly recent innovation, at least on the grand scale in which they are being done, the economics implicit in these controls is fairly simple. These programs are based upon an application of the principle of production rationing.¹⁵ They take two primary forms: (a) that of rationing inputs, and (b) that of rationing outputs of the farm. It is convenient, however, to further separate the rationing of inputs into two subclasses; namely, those inputs which are relatively durable, extending in the case of crop production over more than one crop, and those inputs which are transformed into products in a single crop year. Accordingly, we have the following types:

1. Resource rationing
 - a) Inputs transformed into products in one crop year
 - b) Inputs transformed into products over a period of crop years
2. Market rationing

Market rationing has been done by establishing quotas of the amount of product which the farmer may sell or process into salable products. The control of crop production under the AAA has been chiefly of the type 1-a or a combination of types 1-a and 2.

There are implicit in the control of crop production three kinds of economic effects; i.e., production, price, and income. The later two are, however, resultants of changes occasioned in production.

To see how this technique of the AAA has worked let us take the first type of rationing and sketch what happens when it is applied. Let it be assumed, for example, that the acreage which is allotted to a farmer for production of a given crop has been curtailed, and assume further, as is

¹⁵ See my article on, "Capital Rationing, Uncertainty, and Farm Tenure Reform," *Journal of Political Economy*, January, 1940.

generally the case, that his price expectations for the crop take an optimistic turn because of the planned curtailment of output. Under such circumstances one of the following, or a combination of the following, lines of action is open to the farmer: (1) he may remove the poorest acres from production, (2) he may use better seed, more fertilizer, and take better care of the acreage he is allowed to crop, (3) he may employ the acres released by the allotment to produce substitute crops, or (4) he may use the acres taken out of the crop which is being reduced and improve his soil resources.

In more familiar economic terminology these alternatives involve the substitution of one resource for another (in the case of complementarity of two resources, the opposite of course would be true), the increase of one product at the expense of another product, and the substitution of present outputs for future outputs. Each of these is determined by its own marginal rate of substitution. In principle, therefore, the nature of the readjustments is readily determined. The application to actual situations, however, is exceedingly difficult because of the lack of accurate knowledge of the technical rates of substitution that actually apply in given types of farms.¹⁶ Usually these have not been known with sufficient accuracy to predict results with much precision. Out of the experience of the AAA, however, there has accumulated a considerable body of evidence which provides a basis for estimating the nature of these substitution rates. It is now possible, therefore, to estimate within fairly reasonable limits the effects which rationing of land has upon crop production.

The technique which the AAA has employed has been to ration the crop acreage of given key crops. This has been done by allocating a specific acreage to each farm. The over-all conclusion is: In most types of farming there has been sufficient flexibility because of substitution to offset the anticipated reduction in production of any moderate cut in acreage. As a consequence the crop production features of the AAA have been quite ineffective. It is only when drastic cuts in acres were enforced that any substantial change in production has occurred.

The experiences in the case of corn illustrate how shifts within the farm have offset production effects of the cut in corn acreage. The acreage reductions called for under the AAA in 1937, 1938, and 1939 reduced the acreage put to corn, in the six central corn belt states, by 8 per cent.¹⁷ Corn production, however, in these states actually averaged 17 per cent more than in the earlier years in spite of the cut in acres. Furthermore, because there was more acreage in other feed crops, the total feed supply was in fact much larger than formerly. Since weather plays such an important role in

¹⁶ Expected rates are the bases for farmers' decisions. See my article, "Theory of the Firm and Farm Management Research," *Journal of Farm Economics*, August, 1939; and also, Professor Black's amplification in the August, 1940, issue of the same *Journal*.

¹⁷ Compared to 1929-32.

determining the size of the corn crop of any given year, and because in each of the three years unusually favorable seasons prevailed, probably about one-half of the increase in corn production is ascribable to that factor alone. However, largely as a consequence of the AAA program which includes not only the reduction in corn acreage but also its conservation and benefit payments, rotations were substantially improved by the use of practices which improved corn yields. Corn was cultivated better and the improvements made possible by hybrid seed were rapidly adopted.

CORN PRODUCTION AND ACREAGE ADJUSTMENTS

	1928-32 average	1937-39 average	1940 ^a	1937-39 in per cent of 1928-32	1940 in per cent of 1928-32
I. Acreage ^a					
United States	103	92	86	89	84
6 central corn belt states ^b	39	36	32	92	81
3 western corn belt states ^c	21	13	12	60	54
II. Production ^a					
United States	2,555	2,611	2,352	102	92
6 central corn belt states ^b	1,345	1,571	1,267	117	94
3 western corn belt states ^c	432	170	195	40	45

^a 000,000 omitted.

^b Iowa, Illinois, Indiana, Minnesota, Ohio, Missouri.

^c Nebraska, Kansas, South Dakota.

^d Estimates, production data taken from United States Department of Agriculture *General Crop Report*, October 1. Acreage data taken from *Crops and Markets*, August.

But this is not all. The AAA has induced an expansion in substitute crops, especially of soybeans and of the more productive legumes, with the result that even though corn production had been decreased, the total feed supply of concentrates and roughages combined would not have fallen even though the corn producing seasons had been normal.¹⁸

Finally it should be noted that as a consequence of the AAA corn program, partly because of the better rotations which were introduced as a result of the crop control features and partly because of the supplementary income which farmers derived through benefit payments, more capital has been invested in soil productivity. Land has been improved. The agricultural plant in the heart of the corn belt has become somewhat larger than it was before the AAA programs began. This is the longer-run effect. Instead of

¹⁸ The range of substitution is, in the case of corn, not completed with the production of the crops. Most farmers have considerable latitude in the combination of feeds which they use. Accordingly, the conclusion seems fully warranted that a moderate reduction in the corn acreage allotted to corn belt farmers is not likely to have any effect upon the aggregate feed supply produced in that region. A more drastic rationing of the amount of land devoted to corn such as was undertaken in 1940 will change the composition of the feedstuffs available somewhat and may well reduce slightly for a year or two the amount produced. But even this more drastic cut in corn acreage in the corn belt is not likely to have any appreciable effect upon the type and volume of livestock produced. See W. W. Wilcox, *Livestock Production in Iowa as Related to Hay and Pasture* (Bul. 361, Iowa Agricultural Experiment Station), May, 1937.

shrinking the farm plant as was originally intended, at least by some who promulgated these programs, they have had the effect of facilitating plant expansion.¹⁹

The farmers in the wheat and cotton regions probably do not have at hand within the farm the many forms or wide range in which they may substitute and accordingly offset the effects of the rationing of cotton or wheat land.²⁰ The position of the corn farmer in this regard is probably unique. Nevertheless, the upshot is clear: the crop production control programs have confronted sufficient substitution of the type described to have made the efforts at control of production, ruling out the vagaries of weather, in the main, ineffective.²¹ Drastic cuts in acreage in the first year or two do reduce production, but even in programs as drastic as those that have been followed in cotton, within a few crop seasons the total output recovers remarkably in spite of a sharp cut in acreage.

The economist might well ask at this point whether or not the AAA has forced uneconomic use of resources upon farmers in spite of the substitution which they found possible. The answer is an unexpected one. It did quite the opposite. Most cotton, corn, and wheat farmers were not using farm practices which gave them optimum results. There was much lag in adoption of the best known farming techniques which had been developed and since the AAA programs had the effect of hastening the adoption of precisely these better techniques, they have actually occasioned, on a good majority of the farms, what is in essence increasing returns by forcing a recombination of the factors and an introduction of newer and better farming practices.²²

The conclusion, however, stands that the administrative techniques of rationing the use of land, unless applied in an exceedingly drastic form, are not likely to reduce production appreciably.²³ It must be borne in mind, however, that the AAA has other important features, particularly its emphasis upon soil conservation and its distribution of benefit payments, which have been an integral part of crop production control techniques but the effects of which may be treated separately, as is contemplated in this paper.

¹⁹ For more detailed analysis of the effects of the corn program see article by Wilcox and Crickman in the *Iowa Farm Economist*.

²⁰ Given more time, for instance a ten-year period, a good deal of flexibility becomes available to cotton farmers. Resources may be redirected, and a "live at home" use of them substituted for cotton is an alternative frequently suggested.

²¹ The effects of the high loan rates, especially in the case of cotton, are also involved here. Had there been no AAA acreage control the loans would probably have expanded cotton output considerably.

²² This advance in production techniques, however, was probably more pronounced on the farms already using the better techniques than it was on those farms most in need of changing their obsolete practices; accordingly, the differentials separating the "poor" from the "good" farmers have been further widened.

²³ Here again the fact that the AAA was working against the "urge" of farmers to expand occasioned by the high loan rates, especially in cotton, must be taken into account.

Farm Commodity Loans and Storage

World-wide depression and colossal crops mired the late Farm Board but this experience has not kept the federal government from reinstituting loaning operations. While the crop production control features of the AAA have held the limelight, commodity loans and storages have been much more significant in their economic effects. The droughts of 1934 and 1936 paved the way for the ever-normal granary; it appealed to nonfarm people as consumers. They expected that it would stabilize food supplies in spite of the vagaries of weather. Farmers, too, looked upon the plan with favor for it was plain to them that while storage stocks were being built up, the demand would be strengthened.

In the case of commodity loans and storage, it is not possible to turn to a simple set of economic criteria for testing the consequences of such programs; instead, the economics of storage presents a complex skein full of knots and loose ends exceedingly difficult to unravel. The complexity of the matter is readily seen when the alternative aims of storage policy are considered. From the point of view of the farmer, storage policy might be designed to (a) stabilize the annual income of farmers, (b) stabilize the prices of the crop, (c) stabilize the purchasing power of the farmer's crop, and (d) acquire the highest annual income for farmers; while from the point of view of consumers, it might be directed toward (a) stabilizing the standard of living of the consumers, (b) stabilizing the price of consumption goods, (c) acquire the highest annual purchasing power of consumers or maximize the total utilities of consumers.²⁴

Broadly conceived, the aims of storage policy may be subsumed into two broad classes; namely, those which have the effect of altering the "distribution" of income and those which facilitate the allocative aspect of resource use, a classification following the dichotomy established early in this paper. Accordingly, storage programs may be employed either to transfer incomes from one group to another or to correct faults in the production, pricing, and marketing system. In the case of the latter, it becomes an instrument for obtaining more out of our agricultural resources, while in the former it is a scheme for transferring income from consumers to producers or the other way around. To decide, however, whether the interest of consumers should be favored at the expense of farmers or vice versa falls quite outside the province of economics. Such a decision is plainly a matter of ends; hence partakes of value judgments. But if the government decided on general welfare or on other grounds that the income of farm families need

²⁴ This classification of the aims of storage follows the analysis which has been developed in Dr. Adolf Kozlik's manuscript, "The Theory of Storage," growing out of his study on this subject the past year at Iowa State College. Dr. Kozlik's contribution to the economics of storage will be published soon. The aims of storage policy outlined above are not by any means exhaustive nor do they include all of the aims which Dr. Kozlik's analysis takes up. The interest of speculators, warehouse, and transportation interests are among those not included.

to be supplemented, economic analysis demonstrates that the storage technique is both an ineffective and expensive way of going about it. Storages are in fact wholly inappropriate for attaining such a goal. To use them for that purpose not only lessens the effectiveness of the production-marketing machinery but fails to effect any appreciable transfer of income in practice. There is accordingly some loss and little gain in using storages as a means to a solution of the income allocation problem.

This is not to infer that storages in the case of agriculture may not contribute substantially in bringing about improvements on the resource side. The plea here is simply that the two aims be meticulously separated because of the fact that storage programs are inappropriate in the case of one of these aims; and to attempt to use storage programs to effectuate income allocation will not only lead to bad results, but, what is more, it is likely to discredit the technique to such an extent that it will preclude using storages to improve the production and marketing system.

Let us turn now to what has happened in practice in recent years. Farm commodity loans and storage were made an integral part of the crop production control program. They were made one of the major sections of the 1938 AAA Act. Because they were made a part of the mechanism of crop production control, it has been presumed that the loans and storage operations would be safeguarded, thus avoiding the quagmire in which the Farm Board floundered. In the AAA Act, loans and storages are a part of an intricate mechanism involving parity prices, annual changes in supplies, referendums, and subsequent participation and compliance in the program to reduce supplies. It is now becoming apparent, however, that the crop control features have not provided enough protection because of the ineffectiveness of these controls in practice.

Although the loan and storage program was started at the bottom of the depression and although it has benefited from two history making droughts, the loan rates have been sufficiently high and production large enough to have resulted in an accumulation of stocks bigger than even the most liberal estimates of what is required for ever-normal granary purposes. On March 30, 1940, Commodity Credit Corporation had commitments outstanding totaling 950 million dollars. Half of these were tied up in commodities to which the corporation had title and the other half represented loans to farmers. The commitments to cotton amounted to one-half billion dollars, those to corn 300 million dollars, while wheat and tobacco and other crops reported much smaller figures.²⁵

It is not easy to escape the conclusion that the present mandatory loan

²⁵

COMMODITY CREDIT CORPORATION LOANS, MARCH 30, 1940

(From *Agricultural Situation*, May, 1940)

Cotton	9,330,000	bales	\$509,800,000
Corn	513,700,000	bushels	307,100,000
Wheat	106,000,000	bushels	75,600,000
Tobacco	194,000,000	pounds	39,800,000

rates specified in the 1938 AAA Act have given rise to loans which are out of line with the dictates of economic circumstances. The mistake that was made by the Farm Board is being repeated. It has happened under less spectacular and somewhat better conditions, and prospects are still relatively good that most of the accounts may be cleared. In principle, however, what has happened is clear. The storage technique among other aims has been employed to increase the current income of farmers at the expense of (a) curtailed consumption, (b) accumulation of stocks, and (c) lower farm income at some future date than would otherwise occur.²⁶ In practice, the storage program has been dominated by the aim of increasing the current income of farmers, thus attempting to do with storages precisely what they are not suited for. Undoubtedly a good deal has been accomplished in the use of loans and storages in the way of improving the use of resources, but this has been overshadowed by mistakes and losses that have come about because the two objectives have not been kept distinct and separate. Mixing the two as is now the case not only results in some unnecessary loss to society but, also, it is frequently contrary to long-run interests of farmers.

The conclusion stands repeating. Storages are not an effective way of supplementing the income of farmers when that is deemed desirable as a part of public policy. The misuse of the commodity loan and storage technique is likely to discredit all storage operations and accordingly preclude the use of the technique for production where it has an important contribution to make. As will be shown in the final section of this paper, the loan and storage technique may well provide one of the most direct and usable procedures for administrative guidance and control of agricultural production that has thus far been devised. Should this prove to be true, it would appear doubly important that the technique be spared an ill-fated and undeserved death at the hand of public opinion.

Soil Conservation

As in the case of crop production control, it is possible to frame the economics applicable to soil conservation in fairly simple terms. The operational problem which presents itself is that of equating the expected marginal efficiency of the capital invested in soil productivity with the marginal cost of such capital. What we have, therefore, is the task of determining whether to disinvest or invest in soil resources, which in principle does not differ from disinvesting or investing capital in the form of farm equipment, fences, buildings, drainage, or livestock. It is true that the rate at which capital can be added or transferred out of soil resources varies widely with each type of farming. Agriculture presents special technical considerations which classical writers drew upon for many of their basic empirical assumptions. Notwithstanding, the inputs of capital associated with soil resources may take many forms. Some, like most fertilizers, are transformed into

²⁶ Unless the government assumes the "losses" by diverting the excess stocks.

products in a single year while others, for example, a well-constructed tile drainage system, may entail fifty or more years of use before the investment is exhausted.

However, this simple static input-output model, even when expanded to take account of the durable features of certain types of investments in soil resources is hardly adequate to get at some of the more significant difficulties which arise in the case of soil conservation. These difficulties are of the nature of divergencies frequently looked upon as differences between private and the public interest. A more useful classification for economic study, however, is to take the divergencies which arise in soil conservation and examine them as they pertain to (1) cost, (2) revenue, and (3) expectations. It must suffice merely to illustrate these three types of divergencies.

In the case of cost, it is now generally recognized that the marginal cost to the farmer of improving, maintaining, or depleting the soil is frequently not the same as is the marginal cost to the locality. In some instances it is less to the farmer whereas in others it is more; both types of situations are fairly general and of considerable importance. More specifically, many farmers have lowered their cost of production by using farming practices which induce both sheet and gully erosion. The resulting erosion has made farming more difficult on other farms which have borne the burden of the soil wash and also it has contributed to the filling up of streams and harbors. Plainly, a farm operated under such circumstances is not held accountable for all of the costs which are actually incurred in the production of the crop. For example, the cost of dredging the harbors and streams and repairing the harm done on the land of other farmers which are occasioned by such farming practices is not borne by the crop which gave rise to these expenses. The converse of this situation arises when the cost of improving, maintaining, or reducing the rate at which the soil is being depleted is greater to a particular farmer than it would be if the cost were allocated to neighboring farms in accordance with the benefits which each receive from the investment. In the case of revenue, it is also clear that frequently the marginal revenue which a farmer obtains from a given investment in soil resources does not coincide with the true marginal revenue which such an investment produces. The most important instance of this type of divergence is rooted in the farm tenure institutional arrangements. As is often the case, the tenant would be warranted in making important investments, for example, in lime, terraces, and strip cropping in order to maintain or even build up the soil resources of a farm he operates, provided it were possible for him to obtain all of the benefits which would flow from such an investment. However, because of the insecurity of farm tenure, and because the tenant is not certain of obtaining compensation for unexhausted improvements of this nature, he usually is deterred from making the invest-

ment although the expected returns from it exceed substantially the going rate of interest. We have not as yet learned how to harmonize a one-year lease with a five-year investment.

The least explored, and probably the most important, of these three types of divergencies between farmers and other elements in society (other individuals, the locality, state, or nation) is that which arises out of the differences in expectations. To pursue and develop this topic adequately, it would be necessary to establish the fundamental role of expectations to both production and consumption plans of farm families. This, however, would take us too far afield; moreover, the ground has been quite fully covered elsewhere.²⁷ There is a second task, that of applying appropriate expectation models in examining the conservation problem. It is frequently said that farmers are notoriously optimistic; anticipations of a bumper crop and boom prices keep hope alive long after the invisible hand of submarginalism has started closing its grasp. Land is farmed hard—exactng from it more than it can stand—in order to postpone liquidation. There is no doubt that many significant divergencies in the expectations between farm families and the community with reference to prices and yields are the source of important maladjustments in the use of resources. But far more consequential is the part which low incomes play in shaping expectations which result in production plans that "exploit" the soil.

What have soil conservation efforts of recent years accomplished? The official figures of the AAA and SCS are not very helpful in making an appraisal. There are virtually no systematic studies which get at economic effects; therefore, it is necessary to depend on general observations, recognizing full well the limitations of such a procedure.

The major contribution of the AAA, SCS, and public efforts generally in the field of conservation has been to increase our awareness of the problem. The malady of soil losses creeps in on farmers too slowly to make them conscious of what is happening; as with hookworm or malnutrition, those affected usually have no knowledge of its presence. It has taken the shock of dust storms let loose by droughts and of mud left behind by floods to awaken farmers and others. The systematic "propaganda" of government, community agencies, and schools has done much to focus attention upon the misuse of soil resources. Should public efforts in behalf of soil conservation be discontinued, undoubtedly the main legacy of the efforts of the past several years would be found in the greatly increased awareness that people generally, and farmers in particular, now have of the problem.

Another accomplishment has been the advance in agricultural technology which has been induced by federal programs. As was indicated in the discussion of crop production control, farmers have lagged considerably

²⁷ See especially Hart, Hicks, and Kaldor.

in adopting the best-known farming techniques. The most advanced farm techniques permit farmers—especially in the corn belt, to a considerable extent in the cotton belt, and to a relatively limited degree in the case of wheat production in the Great Plains and intermountain states—to maintain soil resources or even improve them without foregoing income currently.²⁸ The AAA and the SCS have induced many farmers to adopt these more advanced farming practices. Much of the slack between what was known in technology and that which was put in practice has been taken up, especially on the better income producing farms. There has been, therefore, a real advance in applied technology partly ascribable to the efforts that have been made collectively in behalf of soil conservation. This gain is both real and significant to farmers and to society generally.

How much the federal programs have accomplished in correcting the misuse of soil caused by low farm incomes is not readily ascertainable. In the first place, the nature and scope of the relationships between soil exploitation and inadequate farm family incomes is not well understood. The situation probably is about as follows: (a) The income which many farm families earn is so small that they are forced by sheer necessity to deplete soil resources of the farm on which they are situated in order to increase their current income; that is, they disinvest soil capital in order to acquire at least "minimum" diets, shelter, and other elementary necessities. This along with lack of knowledge is the heart of the conservation problem, especially in the Southern States. (b) Many farm families in their effort to make capital available for education and other investments to improve the human agent find it necessary to disinvest their soil resources in order to obtain the necessary funds. This problem is of special significance because it can be shown readily that the type of investments involved in this situation, that is, expenditure for education, vocational training, health, and funds to facilitate migration to new opportunities, usually yield an exceedingly high rate of return, and yet it is quite impossible to obtain funds for this purpose in the capital market. No one would advance credit for these ends because there is no way of obtaining a "chattel mortgage" on skills, talents, and improvements in the human agent occasioned by such investments. As a result, the farm family with inadequate income to pay for these items has no choice except to disinvest its capital assets—these might well involve machinery, buildings, and livestock but more frequently they are in the form of soil resources—and transferring them into investments for developing their sons and daughters where the rate of return is usually much higher than in soil resources.²⁹ It does not seem

²⁸ W. W. Wilcox, "Economic Aspects of Soil Conservation," *Journal of Political Economy*, XL, 1938. It is possible, not probable, that since multiple factors are at work that even in the cotton and much of the corn belt advances in the technology have merely offset soil losses; thus hiding the true rate of soil depletion.

²⁹ The first step, of course, is to mortgage the farm, provided it belongs to the operator and his family. But in the case of the encumbered owner, the effects of capital rationing

that federal programs have been successful in getting at these phases of the conservation problem, except to the extent that farm incomes generally have improved measurably during the past seven years, partly as a result of the efforts of federal programs, but more largely because of the improvements in economic conditions all around.

In sum and substance, what the federal soil conservation programs have done is about as follows: (a) Considerable effort has been made to reconcile the marginal cost of maintaining soil resources to the farmer with the marginal cost to the locality. The most specific step in this direction has been the promulgation of soil conservation districts. (b) While there has been considerable agitation to correct the institutional faults in the prevailing farm tenure systems, relatively little has been accomplished thus far, chiefly because this is primarily a state matter. Here we have one of the more serious shortcomings of corn and cotton belt agriculture. (c) Relatively little has been done to lessen the adverse effects of low farm family income upon soil misuse.³⁰ This factor probably accounts for the largest annual soil toll. Its interrelationships with the conservation problem are only vaguely understood; certainly there has not been any direct successful attack thus far in governmental programs. (d) Real strides have been made in facilitating advances in agricultural technology and have led to better husbandry of soil. (e) And most important of all, as far as positive results are concerned, has been the advance that has been made in the awareness of farmers and of the public generally of the nature and extent of the conservation problem. The lack of knowledge of how to handle land is still a major obstacle to be overcome.

Supplementary Farm Income—Government Payments

There has been developed a series of administrative techniques to supplement the income of farm families through government payments. These payments are made directly by check drawn against the federal Treasury. They are of the nature of conditional grants allotted in the main on the basis of criteria designed chiefly to aid commercial farms in cotton, corn, wheat, tobacco, and rice agriculture. These payments have come to represent a sizable fraction of the total farm income in the cotton, corn, and wheat regions as may be noted from the data on the following page.

An analysis of the economic effects of government payments introduces many perplexing problems. In the first place, there is the question of the purpose of these payments. To what extent are they rewards necessary to induce farmers to make specific adjustments such as reducing the acreages

soon make themselves felt. See my discussion of this point in the *Journal of Political Economy*, June, 1940.

³⁰ The grants and aids provided by the AAA for specific farm practices have become increasingly more suitable to the needs of the small farmers and have come to have some merits in supplementing incomes of poor farmers.

of given crops and adopting soil conservation practices, and to what extent are they a means for supplementing the incomes of the recipients quite aside and in addition to rewards for sacrifices entailed in making adjustments? In the second place, there is the whole problem of establishing criteria for allocating supplementary income where the second of the two purposes indicated above is involved. And in the third place, we are confronted with the query, what are the effects of supplementary income upon (a) the mobility of resources, (b) rent and price of farm land, (c) the

PERCENTAGE OF TOTAL FARM INCOME CONTRIBUTED BY GOVERNMENT PAYMENTS*

	1936-38 average	1939
North Atlantic	0.8	1.6
Western States	2.6	6.1
South Atlantic	4.3	9.1
East and West North Central	4.6	9.5
South Central	7.7	17.3
United States	4.4	9.5

* Bureau of Agricultural Economics mimeo report of May, 1940, on state estimates of cash farm income and government payments by months January, 1936, to December, 1939.

Government Payments in 1939

PERCENTAGE OF TOTAL FARM INCOME REPRESENTED BY GOVERNMENT PAYMENTS BY STATES, 1939

Alabama	24.3	Nebraska	11.4	Minnesota	7.4	California	3.4
North Dakota	21.2	Kansas	10.9	Kentucky	7.3	Maryland	3.3
Mississippi	20.6	Iowa	10.5	Wisconsin	6.8	Florida	3.2
Texas	20.0	Missouri	10.2	Oregon	6.3	Vermont	2.8
South Dakota	18.6	Idaho	9.0	Washington	6.2	New Hampshire	2.2
Arkansas	18.2	New Mexico	8.9	Utah	6.1	Pennsylvania	2.1
Georgia	17.0	Arizona	8.8	Ohio	6.0	Nevada	1.7
South Carolina	16.0	Illinois	8.7	Delaware	5.5	New Jersey	1.5
Louisiana	15.8	North Carolina	8.4	Michigan	5.3	New York	1.0
Oklahoma	14.3	Wyoming	7.8	Virginia	5.3	Connecticut	.9
Montana	12.8	Colorado	7.5	West Virginia	4.4	Massachusetts	.9
Tennessee	12.0	Indiana	7.4	Maine	4.1	Rhode Island	.5

returns to the farmer for his labor and management, (d) the risk and uncertainty involved in farming, and (e) the attainment of ends which are considered necessary when incomes are supplemented by public action.

Government payments to farmers are a mixture of rewards for production adjustments and extra income. The federal agricultural programs have accomplished a good deal in each of these two fields. Those pertaining to production have already been commented upon in connection with technological advances, the implementation of certain soil conservation practices, and the curtailment of the acreage of specific crops. Those pertaining to supplementary income are reserved for this section. The two objectives,

however, have been tied together in that the farmer who participated in a program for the awards on the production side also received the extra income payments. During an emergency period, for example, in 1933 and 1934, when all of the agriculture of a region was being badly dislocated because of the price situation of the key crop of that region, the lumping of these two types of payment was both direct and realistic, and relatively little would have been gained in separating them. Such, however, is not the case under conditions such as prevailed in the last three or four years, because the farmers who have been induced to make adjustments in production are not necessarily the ones who are confronted with inadequate incomes.

Pyramiding of Government Payments on Farms with Highest Incomes

The 1939-40 Iowa Farm Sample Survey, which gives a cross-sectional view of Iowa agriculture, obtained data on government payments. These data, when classified according to net income, showed that Iowa farm operators received government payments as follows:

According to Net Income	Average Amount* Received in 1939
Upper third	\$350
Middle third	179
Lower third	152

* From unpublished data growing out of Witt and Hopkins' study of low income farmers in Iowa.

Farm operators whose net income was below \$700 in 1939 received on the average \$127 of government payments. In none of the above figures is the payment to landlords included.

The Iowa farm business records for 1939³¹ show plainly that government payments to farmers have been largest on the better farms in the best sections of the state earning the largest incomes. In the Big Creek Watershed in Decatur and Ringgold counties in southern Iowa payments³² on 109 farms averaged \$277 against \$1,196 for 146 farms in central Iowa. The net farm income of the first group was \$1,205 and of the second \$4,212. These figures speak for themselves. It should be noted, however, that the Central Iowa Association probably represents the best farmers in that section of the state while the Big Creek route is more representative of all farmers in that section. But this fact only gives added weight to the argument that government payments as they are now being allocated do not effectively get at the income problem.

In principle, there is little doubt that government payments made conditional upon specific production performance should be kept separate,

³¹ See Macy, Jensen, and Allbaugh, *Iowa Farm Business Records for 1939*, Iowa Agricultural Extension Service and Experiment Station co-operating, 1940.

³² Since certain gains from corn sealing operations are included in the figures that follow, government payments as used here are not comparable with earlier tables.

both in analysis and in operation, from grants which are made conditional upon performances which are of the nature of consumption.³³ One of these focuses attention upon the firm and the other upon the household. One deals with the use and combination of resources and the other with the utilization of the social product. Accordingly, the criteria for making conditional grants aimed at production adjustments are based on wholly different fundamental criteria from those pertaining to adjustments in consumption. Because the firm and the household are so closely intertwined in agriculture, it might be presumed that little may be gained by treating

GOVERNMENT PAYMENTS INCLUDING INCOME FROM CORN SEALINGS
OF SELECTED IOWA FARMERS

Farm Business Association or group	No. of farms	Average acreage	Crop acres	Payments received per farm	Payments per farm acre	Net farm income	Management return
Central Iowa	146	279	205	\$1196	\$4.29	\$4212	\$2085
Mississippi Valley	150	260	163	878	3.38	3554	1637
Northwest Iowa	156	251	190	843	3.36	3910	1905
Cedar Valley	142	248	162	705	2.84	3254	1417
Northeast Iowa	129	238	149	562	2.36	2799	1083
SCS Tarkio Area	128	190	121	452	2.38	2033	508
SCS Big Creek Area	109	234	102	277	1.18	1205	68

these two components separately. Even when it is desirable on analytical grounds to separate the two it is impossible in practice to do so. There is some merit in this line of reasoning because in practice it is exceedingly hard in the case of a farm to separate the decisions which affect the household plans from those which relate to production. Consumption and production on the farm are still very much an organic whole. Nevertheless, the processes associated with production are not only definable but distinguishable from those which involve consumption. The differences are made explicit when we turn to the criteria of each. Government payments aimed at adjustments in the use of resources relate to such features as land, crops, productivity, and to farm practices such as terraces, strip cropping, and use of fertilizer. When the aim of government payments is to supplement income, then the point of focus becomes one of performances which are associated with consumption; and since the interest of the public is involved, they very properly might become conditional upon performances with reference to diets, clothing, education, and socially desirable migration. This should make apparent the importance of clearly differentiating the aims to be accomplished because it determines the type of program necessary to distribute such payments.

When we turn to the question of what has happened as a result of the

³³ Meaning performances in adopting better diets, health facilities, education, etc.

government payments to agriculture in recent years, relatively little can be said. The reason is simply that no work has been done to ascertain the effects of government payments upon the consumption of farm families and, on the production side, upon the capitalized value of farmers' resources and upon the mobility of such resources. Undoubtedly, the effects have been quite mixed in that some of them have shown up on the resource and others on the income side. In some cases, land values and rents have increased as a result of the government payments;³⁴ in others this has not been the case. In some regions the rewards have gone to the human agent as a "premium" for management, whereas in others they have become imbedded in the value of other resources. It appears plain that the risk and uncertainty involved in farming have been measurably affected by the government payments. These comments at best merely suggest some of the important issues to be examined in any systematic study of the effects which government payments have had upon agriculture.

Positive Proposals

It is of the nature of knowledge that findings should lead to recommendations for action. In what has preceded I have examined the major features of the present agricultural programs except those which pertain to credit, marketing, and consumption. In addition, however, there are many lesser considerations which have some bearing upon agricultural affairs which have not come within the compass of this paper, but about which implicit presuppositions must be made in the proposals which follow.

The present crop production control features of the AAA should be discontinued in favor of other control techniques. A transition period will be required; it will be harder to change over to alternative controls in the case of cotton than in other crops. The transition will be the least difficult in corn belt agriculture.

The commodity loan and storage program should be shifted to deal strictly and exclusively with the allocative aspect of resources, which means that storage policy should not aim to effect income "distribution." This change in focus will entail rather fundamental reorientation in the expectations which farmers and farm leaders now have with regard to loans and storages. Administratively, the storage technique will have to be freed from any mechanical and rigid formula specifying loan rates in terms of any two, three, or even more variables, including the formulas based on parity prices. It will not be easy to make this shift because of the deep-seated public belief that more adequate farm incomes must somehow be "earned"

³⁴ There is reason for increasing concern on this score. Owners of land resources are getting more and more of the additional income paid to farms in government payments. In the heart of the corn belt some owners are replacing their tenants with a wage manager; thus collecting all the payments. Others, and more generally, are squeezing the tenant with higher cash and incidental rents.

through rewards meted out by the pricing process. Furthermore, it is not a change which the policy and administrative personnel of the United States Department of Agriculture may make without regard to the "canons of good policy" held all along the line, nor can farm leaders be expected to take this step until there is an understanding of the principles which are involved in solving this problem on the part of the rank and file of farmers.

Once, however, this shift in aims is made, I am convinced that this administrative technique which has been developed around the use of loans and storages opens the way for effective guidance and control of agricultural production on a level at which governmental action may successfully complement the essentially free enterprise economy of American agriculture. The loan and storage operations may then be employed to guide and direct the use of the nation's agricultural resources along lines which will optimize the use to which they are put.³⁵ This would require that the loan rates that are established and the storage stocks that are accumulated be determined by production, marketing, and consumption criteria, which would leave the task of supplementing the income of farm families to other procedures to be discussed below. In order to guide production effectively, it is necessary to announce the loan rate well in advance of the time that farmers start making plans for the production of the new crop.³⁶ By taking this step the government would introduce two new important considerations into agricultural production. In the first place, on the basis of the best knowledge and information that can be obtained by the central agency, a loan rate would be announced which would be effective for the forthcoming crop. This rate would be in effect the minimum price, and with sufficient storages it also would tend to be the maximum price, which would guide farmers in making their production plans. It would have a pronounced advantage over the present AAA procedure in that it would permit each farmer to combine his resources in light of the cost-price structure of his farm. The farmer, therefore, would maximize the output of his farm on the basis of the input-output ratios which confront him in his operations. He would accept the loan rate as one of the given conditions on which to base his plans. In the second place this action would transfer from the farm to the central government agency the task of bearing certain price uncertainties which arise during the time span that the farmer is in process of producing the crop.

Much of the inefficiency in the way land, labor, and capital are used in

³⁵ The notable exception will be in the essentially marginal areas. Loans and storages will not be effective devices for contracting agriculture in (say) the cotton or wheat areas; however, it is plain from experience that the crop control features of AAA were also least effective in these very areas. It will be necessary to use wholly different techniques to correct the kind of problems found in the large areas which are from time to time marginal or submarginal.

³⁶ With some modification, this technique is applicable to livestock plans and production. It is, in fact, even more important in livestock than in many other areas.

farming has its origin in the uncertainties which confront the farmer as he plans and carries through his production operations. These uncertainties are of two major classes: (a) those which have their origin in the economy outside of the farm and which are transferred to the farmer through prices at which he sells and buys; and (b) those which are specific to the resources of the farm which in the main have their origin in the vagaries of nature. Farmers are technically quite inefficient in making adjustments to bear the incidence of uncertainty because most farms are exceedingly small businesses and because the resources at the farmers' command do not give them the necessary flexibility for adjusting to unexpected change. But to the extent that farmers attempt to attain this flexibility, they occasion the inefficiencies referred to above.³⁷

The proposal that the loan rate be announced a year or more in advance of the time the crop is harvested will place the burden of formulating expectations upon the federal government, which has at its disposal expert knowledge and information of local, national, and international conditions, the significance of which can never be accurately and adequately diffused to all farmers, no matter how well and how intensively the present outlook programs are done. This is neither the time nor the place to enter into a discussion of the many details that this proposal entails. There is, however, enough experience which has grown out of the Farm Board and New Deal operations to indicate that the government can make announced loan rates work when coupled with storage operations. Also, the gains and losses which would occur because of variations in crops and, also, but to a less extent, those arising out of changes in demand and technology may be handled so as to cancel out. The fact remains, however, that the most salient stumbling block to this proposal is the widely held belief that more adequate farm incomes must be "earned" through the prices which are received for farm commodities, which makes it exceedingly difficult to use loan rates to guide and direct production rather than to "distribute" income.

With regard to soil conservation, less emphasis should be placed upon direct controls which specify the nature of the farm practices which a farmer may use. The soil conservation problem is at bottom largely an income, institutional, and educational matter. Accordingly, more stress needs to be placed on those types of social engineering which will improve the institutions which determine farm tenure arrangements, credit facilities, the responsibility of the locality for group action in land use, and the knowledge of farmers. And above all it is necessary to take more positive action

³⁷ The present program of crop insurance gives promise of becoming a successful administrative technique for pooling and allotting the risks that arise out of the variations of weather. Gradually it will probably be possible to charge the costs of carrying these risks back to agriculture, thereby imbedding them in the land values of the section. The procedure should protect individual farms in their year-to-year operations while burdening the value of land with the cost of the risk insurance against the hazards of weather found to be typical of that section.

in supplementing income, specifically of those farm families where inadequate incomes cause them to disinvest soil capital.³⁸

Government payments to farm families might well continue to claim substantial budget appropriations because of the large number of farm people, especially in the South and the Plains States, with wholly inadequate incomes³⁹ to feed, clothe, and house themselves and to educate and move their children to places of better opportunity. The present criteria for distributing government payments to agriculture need to be overhauled. The payments should be shifted, in the main, from a production to a consumption basis, the latter to include capital investments in the human agent. This change will necessitate less emphasis upon farm land and other material resources and more upon farm people; hence less stress on the commercial aspects of farming and more upon measures of social welfare. The diets, shelter, education, and mobility of the large numbers of children which are being reared in farm homes are of vital concern to society. They are our replacement stock of tomorrow. Their health, training, and ability to migrate where they are most needed is vested with a good deal of public interest. It is necessary that government payments be distributed increasingly in such a way that they will reach the particular farm families with inadequate incomes and that they will help rather than hinder socially desirable migration.

There is, however, still another task which government payments will have to perform in the transitional period ahead. In order to establish the procedure that commodity loans and storage are not to be used to affect income allocation, but instead, strictly to facilitate the production and marketing of consumable income, it will be necessary to use some of the present administrative machinery to supplement the income of farmers when commodity loans and prices are too low to earn an adequate income for the farmers affected. In performing this task the notion of parity income has considerable merit.

³⁸ The grants and aids which AAA is giving for certain farm practices might well be expanded and made an important feature for supplementing the income of farmers with inadequate incomes.

³⁹ In the wholly objective connotation of that term: inadequate income in terms of social welfare criteria publicly agreed upon, meaning that society through approved governmental policies decides that it is to the interest of all to raise such inadequate incomes to the level dictated by the agreed upon social welfare criteria.

THE FARMER IS DEPENDENT ON NATIONAL PROGRAMS

By BENJAMIN H. HIBBARD

It has been many years, if ever there was previously such a time, when the welfare of agriculture depended on forces outside of its own reach rather than upon what might be done within and for itself. Such seems to be the case at present. The farmer must, of course, carry on his work in a genuinely high-grade manner in order to reap any reward, but circumstances have so shaped themselves that the welfare of the farmer, presumably for the next ten or twenty years, depends more on public action than on anything he can do for himself, other than to practice good methods such as he now knows and is disposed to use. Refinements in farm management make the difference between some degree of success and failure; skillful marketing, either privately or through co-operation, may easily make the difference between loss and gain, and, as a concession to the metropolitan press, diversification may save some. That many factors enter into the balance of small incomes and small out-goes with telling effect is but the commonplace of everyday life. When all is said and done there can be but little headway made toward a desirable life for the American farmer without more aid from organized society than he has needed since the Mississippi Valley became the breadbasket of the nation.

The most immediate trouble with agriculture is that its plant is too large; it is over normal; worse yet, in spite of unemployment developing within its own ranks, it is threatened with still more workers, both from within and without. Its market outside the country is demoralized and not likely to recover in a major way for years to come—by no means likely to recover under a *laissez faire* treatment, and for the following reasons: First, as never before in the past half century, a small surplus of product is capable of dragging prices down below subsistence levels, as is notably the case with wheat, hogs, and dairy products. Secondly, a surplus in cotton, constantly affecting a fourth to a third of our farmers, is inevitable. The same is true of certain kinds of tobacco, of apples, raisins, many other fruits, green vegetables, and so forth. Exportation was hard, because of exchange difficulties, tariffs, and quotas before the present war. Now, it is in the main impossible.

But Henry Clay told us a hundred and fifteen years ago that we were likely to get into just such a jam as we are in. He would have been looked upon as a better prophet had his prediction come to pass in a quarter or a third of the time it has taken. But we have our own isolationists who rate Clay above the economists, and who work and pray to keep our people, goods, and capital at home, in the belief that we can build a better civilization by shutting ourselves in and not dealing, except and unless incidentally, with the rest of the world. Impossible though this seems to most of us, should we be forced into such a regime, we would then require governmental action with a vengeance. The readjustments would need all the wisdom and strength of the best statesmen: there would be great migrations of people to be engineered; the expansion of certain industries which would create more demand for their forces than had ordinarily been the case; the curtailing of many lines of work which have been

engaged in growing or manufacturing goods for export. Commercial agriculture will be given a body blow and petit culture will become the order of the day. We will tear down our barns and build cottages, stables, and pens, and restore to honorable rank among our copybook maxims the old classic, "Now that I have a pig and a cow, everybody bids me 'Good Morning.' " That the nation can feed and house more people with spade, hoe, and handicraft agriculture and industry than can be done under a comprehensive commercial regime is beyond question. There are many precedents and examples to prove this contention, as witness, India, China, and Japan. Population will be denser. We may develop a new interest in Heaven by the isolationist life, but it will be hell getting adjusted in this life. This is of course on the supposition that if we make peasants out of our farmers, they will cease to play the role of farmers and will act the part of peasants.

It is from this point of view that the conclusion is reached that, since we are not ready to crawl into our holes and count mere existence life, we shall need leaders capable of making plans which involve not only agricultural economics, but all economics, plus what our predecessors had in mind when they were laying the foundation of the branch of learning which they called "political economy." We must now join with political science, social psychology, history, and the other social sciences as allies in our campaign against the forces which have broken in upon and broken down our home economy and our outside relationships of a short quarter century ago.

In turning to the two interesting papers which we now have under discussion it would be easy to commend them *in toto*, and there let the matter rest. On the other hand, it is extremely doubtful that any man, or any two men, can at the present time put forward a program for agriculture that can be more than tentative or that should not be called into question at many points.

The present papers probably go too far in accepting the present plan of agricultural relief. This is said with full recognition of the fact that there are perhaps no minds in the modern world capable of grasping the multitude of results bound to flow from such actions as our government, and most other governments, is taking in the hope of restoring order within the economic affairs of their respective groups of people. What we have done up to date is to try to adopt England's world-famous methods and doctrine of "muddling through." First, we proclaim a formula for parity prices as the main goal, a formula covered over with a thin veil of science. Next we resort to loans, and promptly we change the size of the gold dollar but bury the dollar, or at least the gold. We raise the tension of the wage payment and decrease its frequency. We make commendable progress in restoring world trade, but it is at first inadequate and next, due to world events, inoperative. Thus it may not be disgraceful to muddle through; and if it is the best we can do it is commendable to muddle through on the most approved lines.

The subjoined comments are offered in partial discharge of my duty as a discussant and critic. The papers, both, contain much more that is deserving of assent than of dissent. The comments offered, pertaining as they do to certain scattered assertions to which, it would seem, further attention may well be

given, lack continuity, and therefore constitute a series of paragraphs rather than an article.

Free Competition. The writers of the leading papers of this program appear to agree that in order for agriculture to recover, or perhaps attain for the first time its proper share of the national wealth and income, competition must be made free and effective among those who offer the wares for which the farmer must exchange his produce. It has been a patent fact since the first World War and just as true, though not as patent, preceding that War, that the farmers' prices received were lower than his prices paid. This statement requires substantiation and elucidation, since there is no basis of comparison without some sort of standard of measurement of quantities which are not identical in character. If the prices of farm and nonfarm goods were out of balance or harmony the first decade and a half of this century, when were they together? Probably never. Was, then, the farmer as well off in relation to the welfare of his city cousin at that time as ever before? No doubt he was, but he was not at the time convinced that the relationship was such that it was to be accepted as fair and final. As the balances during those years swung somewhat more in his favor he was stirred to gain still greater advantages, as witness the efforts of the Farmers' Union, the American Society of Equity, and the awakening of the Grange. It was by good luck rather than by design or action that the farmer found himself in the best relative position during the few years immediately before the War that it had been his lot to enjoy in modern years. This is the parity to which, after the slump to conditions much worse, he has longed to return. It is the promised land toward which he has been lead to believe he has been journeying during the past eight years. But he is still wandering; and perhaps because manna has not failed him, he still professes faith in his leaders. Even so, he is not satisfied with his rations, and feels that other members of his caravan are faring more sumptuously than he.

Coming back to the most commonplace form of statement, the farmer is being told constantly—and he believes it—that through connivance the other members of the body politic are cheating him out of part of the fruits of his labor. They are doing this by collusion or agreement not to offer goods against competitors to the detriment of profits. They are holding down their offerings and thereby holding up their prices. Neither do they, the more fortunate, suffer from accumulated surpluses. There are no surpluses, since they can discharge their laboring force and billet them on the rest of us. They have made the shekel small and the ephah great; concretely, they now demand 215 bushels of wheat in exchange for a self-binder, whereas in 1916 they were satisfied with a hundred bushels less. This is not a fair sample. In general terms, the farmer gives five bushels, pounds, or dozens, for an article which in the golden age before the War he got for four.

Reference is made to Mr. Thurman Arnold and his efforts to enforce the rules of free and open competition in the interest of agriculture and of the public in general. Mr. Arnold, himself,¹ seems to have full faith in the Sherman Antitrust Act, but not too much in the government back of it. The government does

¹ *Vital Speeches*, June 15, 1939.

not give him much money or man power with which to fight the Goliaths of predatory wealth, and the pebbles and sling, as of old, do not appear adequate. This may be, but let us notice for a moment their greatest effort of the past quarter century. The Department of Justice indicted, in 1936, a group of oil operators—thirty-six individuals and companies. They were charged with having entered into a conspiracy in the purchase of certain small quantities of "homeless" gasoline. The story is a long one and cannot be told here, but a few points are pertinent. First, it was preposterous to suppose that the price of the millions of gallons sold daily in the Middle West was actually set in this little open market for a few cars of gasoline. Secondly, the accused acknowledged that they had agreed among themselves, in open meeting, that they would take this gasoline as offered, at the market price, from day to day. Now if the market price had been made the issue, we would have had a battle royal, on a key commodity, the outcome of which might have been a precedent for many more contests of similar import.

Had they gone into the major question of prices as found in the petroleum field, it would have been reasonable to raise the issue of ownership of a fugacious commodity, still underground, and the wasteful methods, under fierce competition, of bringing it to the surface. Inroads might have been made into the ridiculously expensive methods of retailing the products. The public has to pay the bills, both at the producing and the distributing end: the one a waste due to too much competition; the other a loss due to too little (or, perhaps in a better sense, altogether too much). The government won its case, but the fundamental, vital, issues connected with petroleum are no nearer solution than when the Supreme Court "dissolved" the Standard Oil Company twenty-nine years ago. This recent trial cost an immense amount of money—millions of dollars; the fines imposed were trifling. The fight was over a technicality, not a principle, but it was "a famous victory," leaving everything of importance, from alpha to omega, to be considered, contested, and decided on future forums.

When the history of the first half century under the Sherman Antitrust Act is written it will be a close paraphrase of the classic chapter under the title: "Snakes in Ireland."

While we are thinking of rigid prices, it must not be forgotten that the largest component part of the cost of industrial goods is labor, and that labor has made no concession toward a balance of accounts since prices have fallen. For instance, the index figure for factory labor in 1920 was 222, in 1930 it was 227, and in 1940 about the same.

The following conversation took place between a bricklayer and a home owner in a northern city:

Q. What are a bricklayer's wages at present?

A. A dollar and a half per hour.

Q. Rather good wages?

A. Oh, yes, pretty good.

Q. But perhaps you do not have work all the time?

A. No, that's right, and you see the worst of it is that the more you get when you work, the more you lose when you don't work.

There is no more rigid portion of prices than the portion going to labor and,

moreover, the portion over which labor has powerful control. There are different logs interlocked to cause the jam but none stronger or harder to dislodge than the one representing labor; but as to breaking the jam, labor has lent no aid and made no concession.

How Prices Are Not Determined. Professor Schultz is an advocate of fair prices to which no man of probity and altruism can object. But Professor Schultz is not content with the mere dictum that prices should be fair. He goes on to tell what he means by the term; he is specific. Fair prices are such as will provide the recipient with an adequate income. Since, however, income, in the form of a price, is a multiple of two factors, one of which is the price per unit obtained the other the quantity of goods or service which the recipient contributes, it must be that he, when he gets a fair price, must likewise offer a fair number of units of produce. Moreover, the offerer of goods has himself expenses to meet, and since these condition his income, it must follow, further, that he pays his hired help fair wages and that the people from whom he buys charge him fair prices. Otherwise the "fair" price which he receives may not be adequate. Thus we get into a maze of causes and effects. If one price is to be fair, then, forsooth, the rest must be fair. This means that ultimately all prices must be fair. But who knows just when they or any of them are fair? Next comes one of our well-known economists, Dr. Taylor, who carries this same idealism a step farther.² The prices, which he wishes to have stabilized at a fair level, must be just prices. The word just merely means righteous. In the old Hebrew law the merchants and tradesmen were admonished to use only "just balances and just weights." Nothing was said about just prices. Price determination must have been left to the "higgling of the market." But a just price is one which, under some code of rules, a judge, a commission, a parliament, or a congress declares to be just. Somebody has to make the decision, either once for all or periodically, as to what is fair and what is just. And just possibly the price determined in this way will not balance the demands and the supply in such mannner as to clear the market places, thus allowing surpluses to accumulate to plague the producer or deficits to distress the consumer. The buyer will, in case of surpluses, offer less because of the evident anxiety of the seller, and a buyer's market will result. The Sherman Antitrust Act might help in cases where there is a clear-cut, high, monopoly price, but thus far it has been a feeble help for the distressed farmer.

A fair price is, of necessity, an administered price—a price fixed and maintained by authority. A just price is, if possible, at once righteous and adequate. But fair and just prices do not as such, labeled and recognizable, obtain in the markets which we know. The bidding of the buyers and the acceptance or refusal of the sellers in a free market within the realm of capitalism is not, except in general terms, a moral procedure. It is a forum in which arguments are going on as to what prices are going to do next. It is an occasion on which we get rid of what we do not want or cannot keep, and acquire what we want more keenly at the moment. But when wheat fell to forty-five cents in Chicago in 1931 it was not a case of moral turpitude on the part of the buyers. Neither could sufficient justice be commingled with the economic ingredients of the cotton market of

² *Journal of Land and Public Utility Economics*, August, 1940.

today to afford the cotton grower a decent living. This is not a matter of fair or foul, justice or injustice.

When it comes to prices due to governmental action then fairness and justice enter. If the government has given one group an advantage over other groups the results are unfair, and unjust. Thus far, however, we believe that a very great part of our prices are not clearly and rigidly monopolized.³ Where they are, something should be done about it. However, there are numerous and widespread instances of thoroughly inadequate incomes based on conditions harder to meet than that of regulating a monopoly. It may be that there is an element of injustice and unfairness in the action of our priests and Levites who leave to the humbler Samaritan the responsibility of extending aid where it is obviously needed. But coming back to the question of the prices under which farmers have suffered, they are not primarily unfair, since they were not made by methods or means which come under the caption of either fairness or unfairness. They were not such in 1909 to 1914. They are the result of a world calamity which has deprived us of our markets. With the failure of markets and its aftermath of unemployment comes a return to the primitive, a seeking for wells and water holes, a scrambling for the right to a corn and potato patch. Our distress may be the result of unwisdom, lack of statesmanship, or international comity. But our prices of eight cents for corn, two cents for hogs, five cents for cotton, and nothing for potatoes—these prices of 1932—were not the result of unfairness. They followed a boom which followed a war, a war which, moreover, had antecedents.

If by fairness in the field of prices we mean merely the stopgap procedure of contributing money collected from one group, or more likely borrowed from one group, in order to splice out a probably inadequate income received by another group, we will all agree that considerations of fairness and justice enter. If we mean that, as at present, agricultural prices are relatively lower than they ought to be as judged by welfare conditions, we, the agricultural forces, will try through pressure groups and political measures to augment the receipts, not until we reach a fair return, but until the highest point attainable is attained. Competition is not such a just arbiter of contests that a party while gaining advantage is ever the first to cry "Hold, enough," and furthermore, competition, as idealized by the classical economists, is seldom attainable.

Children Our Greatest Resource. Mr. Tolley calls attention to the remarkable fact that the farms, with but one-fourth of the population of the nation, account for almost half of the children, and he goes on to state that these children constitute the best single guarantee of "continuing prosperity." It could even be argued that they are the only hope of continuing the race. On the other hand, the excess number of children in the country is rather a threat than a guarantee to our prosperity. Population is clogging up in the country districts. Such people, as they come to mature years, will make poor customers for city manufacturers. In the more congested districts, such as the southeastern farming states, there is danger that many of these underprivileged children will be supported by the dole furnished them by the better privileged group, and that all will be dragged down together.

³ Our best students of this problem clash head on.

There is no more sacred duty confronting the nation than that of educating, training, and nourishing its children. There is no more threatening, no more sinister threat to our body politic, than the rapid multiplication of the less competent elements of our populations. If there were any way to get it we should demand quality in our citizens as well as in our seed corn and livestock.

One of the leading authorities of today on the subject of population, Dr. Paul Popenoe, has recently remarked that the upper groups of the American people have 30 per cent too few children while the lower strata produce a like proportion too many. The least prosperous group of our agricultural population, instead of contributing to our best and greatest resource, is contributing to our greatest, most perplexing, and least understood responsibility, the survival and increase of the unfit, or at least the unfitted. To the extent that we can pull them out of their economic slough of despond, they will make less trouble immediately because of their better situation and less trouble ultimately because of a lessened increase in numbers. Never was the general truth that "like begets like" more thoroughly demonstrated than in the self-perpetuating power of poverty.

Those among us who feel that we are on the way down and out because the growth of population is slackening off should read anew Mill's chapter on the "Stationary Stage with a Stagnant Population." Those who survive will be just as happy or possibly happier than were those who have passed on, because of more room, more food, and more wilderness. To quote:

Nor is there much satisfaction in contemplating the world . . . with every rod of land brought into cultivation, . . . every flowery waste or natural pasture plowed up, every hedgerow or superfluous tree rooted out, and scarcely a place left where a wild shrub or flower could grow without being eradicated as a weed in the name of improved agriculture.

Those who are solemn over the decreasing increase in population should profit by reading again, "The gay shall laugh, when thou art gone," and if population should prove to be a little less, while the gay are laughing, the real estate promoters may wish "the solemn brood of care plod on," A. T. and T. stock may sag a point, but Bleeker Street and South Halsted will be looking up.

The continuing prosperity of the nation will never be furthered by the advent of more children among the undernourished. We will try, let us hope, to take better care of those we have and those to be born; but instead of complimenting the people who have more children than they can feed, clothe, and educate, as having contributed to the permanent welfare of the nation, we should rather declare for the next generation or two a continuing open season on the stork.

The authors of the two major papers are greatly concerned over the consignment of an annual crop of children reaching the adult stage, who have been reared in the country as economic liabilities to their home communities, but who are sent, as assets, to the cities, which get them without payment. In the redistribution of wealth this has been a real point in the past. For some years the cities have been anxious to reverse their old policies and stop the greatest share of population consignments. As a nation we took the same stand early in the century by refusing admission to immigrants, even of the most productive ages and from the best of environments. Additional adult men or women, except a few of special attainments, are no longer viewed as assets. Should these excess country children remain permanently in the country they will, as Professor Schultz points out,

become liabilities. Even so, the National Grange at its recent annual meeting passed a resolution asking that steps be taken by the government to help a million stranded families onto small farms.

Foreign Trade Is Gone. Is foreign trade gone with the wind? Shall we study the figures showing the decline in the exports of wheat, cotton, pork and lard, automobiles, general steel products, and sundries; and from the study conclude that the doctrine of comparative costs was formerly for the childhood of the nation and now for sophomores of the classroom? Must we conclude that the realities of modern trade point us to the rising mercantilism of our competitors of the past half century with its extremes of the period following Versailles; and that we shall no longer deal with our neighbors on free and friendly terms?

Just after the first World War had closed and while we were putting the finishing touches on the Fordney-McCumber tariff act, designed to continue our American way of life while Europe was paying the penalty for her folly, one of the most outstanding farm leaders was asked if he did not think some of the industrial tariff rates which we had just set were not a little high in view of the European situation? He replied: "Ah yes, they are too high all right, but after all those fellows have done for us we can't say a word about it." Again this year the representatives of another group resolve in favor of hanging on to all the protection which they, as farmers, now enjoy, and it is not a negligible bit.

The advantages which we, a few years ago, had in the world's markets we bartered for a mess of pottage. We are not by any means through with this sort of bargaining, and right now the outlook for any other program is not favorable. We should not be so shortsighted as to let ourselves imagine that the present world catastrophe is permanent. And when the war ends, as it must, there will be restored a great deal of international trade; but there is a grave question as to which nations will enjoy it. Our trade of the past required little diplomacy. It fell, as it were, like ripe fruit into our lap. When the doors are again opened for trade the sellers will be scrutinized by the buyers most critically. Not only will they want to know exactly what we have to sell, but even more pointedly will they ask what of their wares we will buy. To no great extent will they offer us gold as they have been doing. Just possibly we may have decided by that time approximately how big a nugget we wish to develop in Kentucky, or possibly we may arrive at some conclusion as to the use to which this, the world's greatest hoard of precious metal, is to be put.

Faith in the future of foreign trade in agricultural products is, indeed, not founded on much that is tangible, or which lends itself to substantial proof or visible evidence. This faith is no doubt to some extent the substance of things hoped for. However, before we conclude that all the advantages of trade outside the country are gone we should at least consider certain probabilities. First, there will continue to be many peoples who cannot adequately feed or clothe themselves from their own fields. These hungry people will include a large part of western Europe, not to mention the Orient. Second, these people, with their nimble fingers and ingenious minds, will be able to make things of beauty and utility out of a small share of the world's bulkier natural resources, which they may trade for our more abundant, or at least bulkier, products of soil and mine. South and Central America can furnish us with mahogany, rosewood, and coffee. They

want our agricultural machinery, and they want us to take some of their beef. The Swiss will take consignments of food stuff and fibers, but we must accept and buy their watches. This is not the time or place to strike a balance among the nations. The long and the short of the matter is that here are plenty of things we can take in exchange for what we must sell in order to use our lands and our hands to their best purpose. In order to get back into the markets of the world we shall be obliged to make concessions, but once they are made we shall be able to live better lives, on a higher plane, and be less concerned over the mere matter of animal existence. We are, thus, back where we started. Economics must include political economy and join with the other social sciences in working out a new balance among the contending powers: industry, labor, and agriculture.

A hundred years ago the farmers were still able to rule the nation, lacking only a purpose, a program, and a united front. Potentially they had the votes. Now, to their surprise, they are again, as a powerful minority, able to get what they want, but before much is accomplished, other than the payment of subsidies, which are not too well designed, and relief, which is a travesty on the traditional abundance of the country districts, we must have some broader-gauge programs, and must meet the stabilizers of scarce industrial goods and the stabilizers of high wages and scarce employment either with an organized farm front based on scarcity or with a national and world program based on sweet reasonableness and mutual concessions. Such concessions might allow a considerable measure of self-determination among businessmen, labor, and farm operators, despite the fact that we all attended the official and formal obsequies of *laissez faire* at Cincinnati in 1932, and have informally observed the anniversaries of the occasion with rather less solemnity since.

Shall Loan Levels Be Set Farther Ahead? Shall we approve of the tentative plan of setting the loan price of farm crops a year or more in advance? Announcing this price a few months in advance has looked to some like price fixing. To extend the plan so as to cover the second harvest ahead will make the price pegging feature of the loans much more evident and virtually indisputable. But we must not fight with words. The whole question to be decided is whether or not the action will bring desirable results or whether it will not.

This brings up the main contentions of Professor Schultz's paper. Is it feasible to use the loan and storage plan as a means of controlling farm resources and to take care of the income question by other means? To begin with the question will arise as to the facts of income augmentation through the loan policy. From the beginning of the New Deal the loans were used with the intention of increasing farm income. That they did result in an increased income of major proportions cannot be doubted. This was notably true of the cotton loans almost from the first, and clearly so with corn loans during the past few years. The loans were intended and designed to increase the incomes. The criticism of the manner in which they have done so is quite in point. The subsidy has been on the basis of output. The family of inadequate income has been helped but little, while those of large incomes have been helped substantially. In these vital respects the plan has been a failure. It has helped most those who need help least and has failed signally in controlling the output of produce.

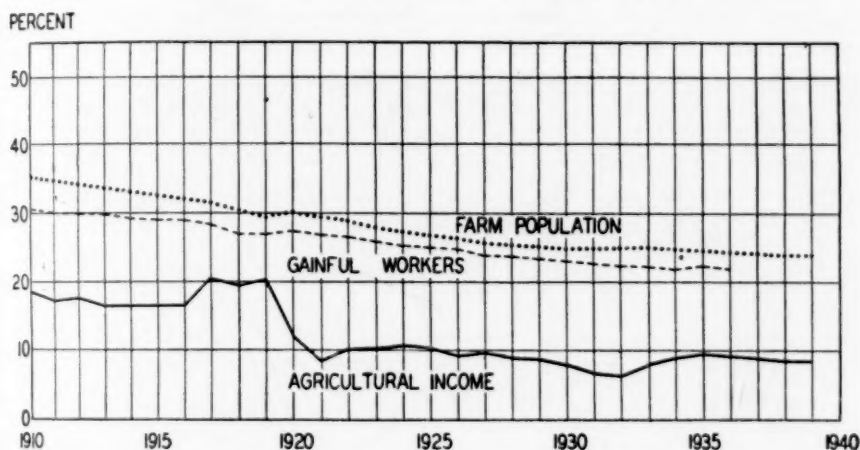
To set the prices for an appreciably longer period in advance will only still further divorce the storage and loan program from the control of output. Not that as a paper program it would appear less workable. It might seem even more rather than less plausible, but no Congress will have the self-control to vote a sufficiently low loan figure to discourage the piling up, or continuance at least, of a surplus brought about by a generous loan level of a preceding year or two. Again, would a price set far enough into the future to give the appearance of price pegging on a few products not provoke the pegging of more and more prices on other goods?

MEASURES FOR THE IMPROVEMENT OF AGRICULTURE

By JOHN D. BLACK

The first 56 per cent of Mr. Tolley's paper is devoted to describing the present condition of agriculture and its problems, and the remainder to outlining procedures for dealing with these. Professor Schultz devotes 23 per cent of his paper to getting started and describing the condition of agriculture and its problems, 14 per cent to setting up his particular criteria for evaluation of the current agricultural programs, 53 per cent to the actual evaluation, and 10 per cent to

CHART 1.—Ratio of (1) Agricultural Income to Total National Income, (2) Gainful Workers in Agriculture to Total Number Employed, and (3) Farm Population to Total Population. (Unit: 1 per cent)



outlining preferred procedures for dealing with the problems. The two papers, therefore, regardless of their titles, come out the same place at the end, and much of the early discussion in both covers the same ground. It is therefore impossible to avoid discussing the two papers more or less simultaneously.

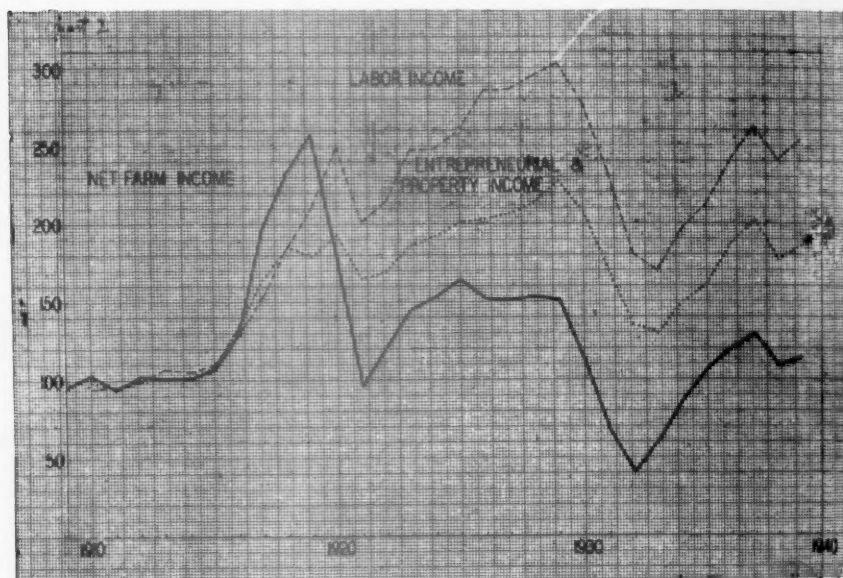
Mr. Tolley's analysis of the condition of agriculture and its problems is the most accurate and best balanced that I have thus far seen, and I have few critical comments to make upon it. In my judgment, conditions in agriculture are just about as bad and as good as Mr. Tolley describes them.

No doubt the reader has noticed the complete absence in Mr. Tolley's paper of statements about agricultural prices and income as related to "parity," and as to the "share" of farmers in the national income. The nearest approach to the latter is a column in the table in footnote 4 giving the percentage of the national income contributed by farmers. The data in this column make very clear that agricultural income has sagged badly in the relative sense, but that is all. The reader may be interested in more explicitness on this point. To this end, Charts 1 and 2 accompanying may be helpful.¹

¹ These are reproduced with permission of the *Review of Economic Statistics* from an article by the writer in the March, 1940, issue, which see for sources of data and methods of computation of the series.

The agricultural income series in Chart 1 checks with the data on the farm contribution to national income in the aforementioned footnote table. This shows that the contribution in the prosperous years of 1928-29 was scarcely half that of the war years, and 60 per cent of that of the prewar years. In the recent depression years it was around 40 per cent of the 1919 level. In interpreting these figures, one needs to remember that agriculture has been becoming a smaller portion of the national economy. But in terms of percentage of total population, the decline of agricultural population from 1919 to 1939 was only from 30 to 24 per cent; and in terms of percentage of gainful workers, only from 27 to 22 per cent. One might affirm, on the basis of such a chart, that the farm income of the United States needs to be raised 35 per cent, or \$2,300,000,000, above recent

CHART 2.—Indices of Net Farm Income, Labor Income, and Entrepreneurial and Property Income, Annually, 1910-39. (1910-14 = 100)



* Preliminary.

levels to put it in the same relation to the national income as prevailed in 1910-14, making due allowance for change in proportion of the total population living from agriculture. In terms of proportion *gainfully employed*, the deficiency would be \$400,000,000 greater. This is the "parity income" concept that was written into the 1936 version of the Agricultural Adjustment Act, and in somewhat modified form into the 1938 version which is still in force. "Parity income" for agriculture would be 12 to 13 per cent of the national income instead of the 8 to 9 per cent of recent years.

This leaves still unanswered the question as to whether using 1910-14 as a bench mark is reasonable. It is commonly acknowledged that urban wages were relatively low in those years. The country had experienced a decade of generally

heavy immigration, and technical progress had been slow. Agriculture, on the other hand, had been more prosperous than theretofore. The high cost of living, especially of the food budget, figured largely in the 1912 election. One therefore has no right to assume that the full differences between factory earnings and farm incomes, nor between farm wage rates and farm incomes, in the twenties represent malproportion in income distribution. But some considerable share of these differences may well have been malproportion. The history of wages offers repeated instances of their stagnation for one or even several decades until some event like a war or strong business boom has broken through and lifted them to new levels unfortunately high from the standpoint of easy postwar or post-depression adjustment. The suddenness and sharpness of the rise in real wages in 1920-21 has proved even more difficult for agriculture to absorb than for industry. It became a major factor in the 1920-30 high freight rates, high trade margins, high taxes, and high prices of machinery and supplies. About the only one of the farmers' cost items affected which even in the thirties was readjusted fully downward was farm wage rates; and this has been a still further misfortune from the standpoint of agriculture as a whole.

As for the comparison with entrepreneurial and property incomes, one must take account of the fact that the series used for this by Dr. Kuznets and others includes farm incomes with the others. Excluding these, it would approximate somewhat more nearly the levels for labor income.

It would seem probable from such comparisons as these that if industrial wages were relatively low in 1910-14, even relative to farm incomes, the tables have not only been turned since 1920, but much more than turned. But these series by themselves cannot tell us by how much. It is one thing to use such series as measures of *relative* change over a period; it is very much another to use the figures for any one year or series of years to indicate the relative level of income or well-being of farm and other groups. Nevertheless, this is constantly being done even by some economists. The first notable instance of this was in the pie-diagrams published in the report of the Secretary of Agriculture in 1921 in which 30 per cent of the population living on farms in 1919 was contrasted with the 19 per cent of the national income. A parallel presentation today would show a 25 per cent sector in one in contrast with only a 9 per cent sector in the other. Nevertheless Mr. Tolley avoids making such a statement.

The professional economist who occasionally steps outside the classroom is placed in a difficult position in dealing with a situation like this one. He knows that the two percentages in this pie-diagram are not comparable; but if he lets his concern over this worry him too much in his public utterances, he is likely to create the impression that he thinks farmers are pretty well off after all. The late Dr. George M. Peterson was thus misunderstood as a result of his paper, "Wealth, Income, and Living," before a joint meeting of these associations in 1932. And even the writer when he undertook to clarify the situation shortly afterwards in an article in the *Review of Economic Statistics*² found that his colleagues in the Economics Department at Harvard considered it a remarkable achievement in objective analysis; but his friends out in the states wondered if the Harvard environment was not wearing in on him.

² John D. Black, "The Agricultural Situation, January 1933," *Review of Economic Statistics*, February, 1933.

Perhaps it will be safe by this time again to point out a few things that make the 25 and the 9 per cents non-comparable:

1. Income from labor and investments off the farm and from pensions and the like are not included in the farm income figures. Some recent assemblages of data on such income suggest that it may add from 20 to 25 per cent to the total.

2. The non-cash part of the farm income, consisting mainly of food and fuel furnished by the farm, is valued at the farm. A dollar of it thus valued buys considerably more than the dollar of urban cash income spent for similar items. The farm family in nearly every case—tenant as well as owner-operator—has the use of some sort of house in addition to this other income. A large fraction of city families must pay rent out of their incomes. Even if farm families had to pay rent, the rural rent-dollar would buy more housing than the urban rent-dollar. These several items may in fact add the equivalent of as much as another 20 to 25 per cent of real income.

3. According to Mr. Tolley's paper, 35 per cent of the nation's increase in children are being reared by the 25 per cent of the nation's population living on farms. From one point of view, these extra children do not produce as much income as adults; from another, they do not cost as much per head to maintain, especially under farm conditions.

The effect of all three of these factors combined may be enough to raise the 9 per cent of income to as much as 15 per cent. Still, this is far from the 25 per cent; and even before a professional audience, one must not let his concern over the difference between the 9 and 15 per cents cause him to overlook the difference between the 15 and 25 per cents.

A factor of another sort, mentioned by the writer on several occasions before, helps one to understand in part the major reason for the remaining 10 per cent discrepancy. It is that nearly half of the farm families live in the South, where nearly all incomes are low, and most of the urban workers live in regions where all incomes are relatively high. A comparison of Mississippi farm and other incomes will not show agriculture at large disparity; neither will a comparison of Iowa farm and urban incomes. Obviously it may be asseverated that a farmer needs as good an income as an Iowa factory worker or construction laborer even though he lives in Mississippi. But until regional differences in general are leveled out, such a case stands on weak legs.

It is necessary also that the writer amplify the second point above lest he be misunderstood as on an earlier occasion. Restatement of a matter so familiar is embarrassing, but experience has taught him that it is never safe to take for granted even an elementary grasp of the principles of index number construction and comparison of costs of living of different countries and regions.³ The farm income in any national total such as worked out by the Department of Commerce has a real income accompaniment in terms of a significantly different regimen than has the regimen of the real income of the urban part of the total; and hence it is never proper to compare them, either on a total or per-capita

³ *Research in Agricultural Index Numbers*, Social Science Research Council Bulletin No. 10 (Scope and Method), John D. Black and Bruce D. Mudgett, ed., New York, 1938.

Hans Staehle, *International Comparison of Food Costs*, International Comparisons of Cost of Living, Studies and Report, Series N (Statistics), Geneva, 1934. No. 20.

basis, when the question in hand is one of real income or well-being. The writer has not implied that the housing of the farm families is as good as that of the urban families; nor that the food of the urban family is as good as that of the farm family. He does assume, however, that the real income accompaniment of the farm dollar on the whole is greater than that of the urban dollar; that if it were possible to set up two regimens, one made up of the things which farm families obtain in the way of real income from their total dollars of income as calculated in the official totals, and another one the exact equivalent of this in total real income under city conditions but consisting of items such as city families obtain with their income dollars, it would be found that the farm family regimen cost considerably less. He knows, of course, that setting up such equivalent regimens is impossible except in rough form, and any one set up will be open to the criticism of subjective bias. Nevertheless, it is better to try one's hand at it than to misuse national and farm income totals in the common manner.

Mr. Tolley cites Dr. James Maddox's estimates of the cost of providing minimum regimens for farm families in the four quarters of the United States—\$705 in the South and \$820 in the North. Here is a real effort at finding the cost of more or less equivalent regimens. The writer suspects that the cost figures are too nearly together; nevertheless, the principle is recognized. As some slight evidence that they are too nearly together may be cited the returns of the crop reporters on farm wages with and without board and lodging. The highest difference reported (1925-29 average) between wages with and without board was around \$25 in the New England states; and the lowest was around \$9 for the South Central states. Dr. Maddox's figures would suggest that all but around \$4 of the difference between \$25 and \$9 was due to better board and lodging furnished in New England.⁴

At two points in his discussion Mr. Tolley seems to accept the "conveniences which most urban people accept as standard" as a proper criterion for estimating the income needs of farm families. The writer would agree that the two regimens are becoming more nearly alike; but the change is in some measure a two-way one. City people are reaching out into the country more and more to obtain certain elements in good living that farm people have as a matter of course, or at little cost; and are paying high for these. The maintenance of an extra summer home in the country, for example, is not a minor item in a city family's budget. Those who cannot afford summer homes try for summer vacations in the country. The poor can afford none of the country. At the same time, some of the items which city people obtain easily are more costly in the country. Modern transportation and the radio have made others, or near equivalents of them, easily available on farms. The two regimens never will be altogether alike; but the point is that they do not need to be to have farm living as good as city living.

Few of the remaining statements concerning conditions in agriculture in Mr. Tolley's paper call for any comment. The decline in agricultural income relative to urban income has been as much as his statements indicate; the current and impending surplus of population on farms is as serious a problem as he maintains. The proportion of farm families living at real income levels too low rela-

⁴ John D. Black, "Agricultural Wage Relationships: Historical Changes and Geographical Differences," *Review of Economic Statistics*, February and May, 1936.

tive to urban families is overstated a little for reasons apparent in what has already been said. The common statement that half of the farm families produce only 15 per cent of the agricultural output is acceptable as a merely physical fact; but it is not true in an income sense, since the 15 per cent buys much more real farm living, ton for ton, or dollar for dollar, than the 85 per cent. The housing, not included in these calculations, is not as good per farm on the half producing the 15 per cent as on the half producing the 85 per cent; but the difference is not as 85 to 15.

Now let us pass on to consideration of measures for improving the condition of our agriculture. It will generally be remembered that the last World War was accompanied by a spasm of price-fixing for farm products, or of active demand for it—both during the war and in the postwar adjustment period. Economists almost without exception repelled the idea. It is therefore of interest to observe Professor Schultz—a front-trench general of the present generation of agricultural economists—already boldly espousing such price-fixing even before the war has reached our shores. In fact, he proposes it not only as a war and postwar measure, but as a regular part of our economic machinery. With some variants, to be sure; but still price-fixing.

It will help us understand this phenomenon if we trace the evolution of it. In this country, war price-fixing on a national scale was practically limited to wheat. (The price-controls on hogs were never really imposed.) Its purpose in the first instance was to assure an adequate supply of wheat for the armies. You will remember that we had a wheat scare in 1917. The price was theoretically set at cost of production, determined by sending a squad of field men out over the prairies carrying a survey schedule. You may remember also that the then Secretary of Agriculture, David Houston, being a trained economist, did not think much of this method of determining a suitable level for wheat prices, and as a result some little unpleasantness ensued in one branch of his organization.

As the war wore on, however, the objectives of wheat price-fixing shifted in this country, and still more in the British Empire. They became more largely that of furnishing a stable basis for government buying—of establishing a price basis that was free of speculative inflation. You will remember that the price of wheat soared when de-control came, and many farm leaders argued that the price control had kept wheat prices from attaining a proper competitive level. A point was frequently made in those days that has much bearing on Professor Schultz's proposal; namely, that a guaranteed price of a certain amount would bring forth a larger supply than a price that happened to average the same amount for several years.

The United Kingdom, you will recall, had by the end of the war become so concerned over maintaining its agriculture, as a result of the submarine scare, that it proceeded to guarantee the prices of all its major farm products on a cost basis, and created a set of economic centers at which were stationed farm cost accountants who were to collect data on co-operating farms and calculate unit costs. The rapid descent in prices in 1920-21 to points well below the cost levels hurriedly established, led to a hasty repeal of the legislation.

The Canadian wheat-growers, on the other hand, blamed the decline of wheat prices on de-control, and demanded a return to government price-fixing. There

was a similar demand in the United States. Several direct price-fixing bills were introduced into Congress; and Congress hastily appropriated additional funds for the farm management division of the Department of Agriculture to enable it to determine unit costs of production; and Dr. Henry C. Taylor, its then chief, proceeded to organize an extensive network of cost-route studies, bringing to bear on the task the knowledge of farm cost accounting that he had acquired from his German preceptor, Von der Goltz.

A number of state legislatures also made grants for the same purpose. Merely to illustrate, it was such an appropriation that brought Professor M. R. Benedict to South Dakota State College and laid the foundations for its present Department of Agricultural Economics. The Iowa group likewise found itself showered with legislative grants for similar purposes, somewhat to the embarrassment of some well-known agricultural economists who presently succeeded to the helm there.

Nor should we forget in passing that the most popularly accepted basis for determining fluid milk prices during the war and in the early twenties was cost of production. In New York State the Warren milk cost formula was actually used—for a short period; and the Pearson formula figured prominently in the debates over the proper milk price in the Chicago market.

All but a few economists opposed price-fixing in those days—except as an acute war emergency measure. The arguments against it generally were that the prices set would not really prevail unless they happened to be set at the equilibrium point or very close to it; and that no procedure of statistical analysis could determine in advance what that point was. Demand schedules were too uncertain and shifting, and statistics on supply incomplete. Unit costs as ordinarily determined, they knew from experience, would always be above the equilibrium point. Is it not permissible to ask whether these are not still valid points against price-fixing?

Pertinent here is also the experience in the co-operative field during the twenties. Mr. Aaron Sapiro gave many co-operative leaders the notion of signing up nearly all of a crop and holding it off the market sufficiently to raise the price to an acceptable level. The organizations that tried this commonly ended in disaster. Economists said that if the co-operatives could set the prices at the right points and adjust them as needed later because of changing market conditions, they could probably improve the marketing of most products; but they doubted whether the co-operatives had the wisdom or forbearance to set such prices. They still have good reason for such doubts.

The only public price-fixing for farm products which actually found a place in our system in the twenties was under the flexible provisions of the Tariff Act; and this set only the margin over the world market price and not the absolute price. Mr. George Peek, of course, had some strange ideas to the effect that the McNary-Haugen plan would get the farmers exactly cost of production, since the tariff-effectuated price which it was to obtain was to reflect the amount of the tariff duty, which in turn was to be based on differences in costs of production. Mr. John Simpson, of the Farmer's Union, wanted prices on the "domestic allotment" of farm products to be fixed by a similar arrangement. Most of you will recall that Senator Norris came within a few votes of getting cost of

production substituted for "parity" in the Senate vote on the AAA Act of 1933.

The Federal Farm Board demonstrated that prices of farm products really could be fixed—for a year or so at least. The prices of wheat and cotton remained at constant levels for long periods in 1930 and 1931. The device was simple: have a government buying agency take all that was offered at the price set until not enough was left on the free market to force the price below it. The AAA had a similar experience with butter in 1933-34.

The crop-control features of the first AAA act assumed that prices could not be set at any given level and held there unless the supplies placed on the market were such as to establish this as the equilibrium level. The important consideration was therefore the control that could be exercised over the supply. The price could adjust itself as it would so long as the supply was under control. This procedure never had much of a chance to be tried. First of all, a loan program was imposed upon it, designed to control prices as well as supply; and second, the Supreme Court and Congress shortly took from it its means of implementation.

Since then the program followed has been more and more of a loan program and less of a production-control program. The loan procedure is out-and-out price-fixing, and effective—*provided the government is willing to take care of whatever supplies are induced by the prices set.* The American Farm Bureau Federation has just passed a resolution favoring high "parity" loans on the major farm products, and letting the government worry over what becomes of the further supplies induced. It asks, it is true, for more rigorous implementation of acreage and market quotas, and heavier penalties for violations; but one has good reason to doubt whether regulation such as the American farmers will stand for can really check a general response to prices of farm products set well above equilibrium points.

If the writer understands Professor Schultz's proposal, reduced to concrete terms, it is that prices normally be fixed just a little above the equilibrium point so as to cause enough of the crop to move into storage to build up a desirable stockpile, but not high enough above it to cause the acreage to be importantly expanded and thus interfere seriously with an equilibrium allocation of resources. If the price is not fixed a little above the equilibrium, of course none would ordinarily move into storage. The stockpile would be kept from growing too large by selling to the trade whenever prices appeared to be rising too much above the equilibrium point.

If for any other good social or political reasons it were decided that more of a given product should be consumed, then some method would be devised for stimulating or subsidizing consumption of it, and the loan price would be raised as much as required to induce the needed increase of production; likewise, if for similar reasons it was deemed good policy to expand the production of a crop. But in this case, the consumption would have to be adjusted to the production needs. Should the production of a crop need to be contracted, as of wheat and cotton at present, this would have to be achieved indirectly by raising the loan price of products that could advisedly replace them in production.⁵ Consump-

⁵ There would be the great difficulty that other producers of these substitute crops would expand their output of them also—probably more than would the cotton and wheat producers.

tion subsidies would surely be needed in this case, since the procedure would raise the cost to consumers of the very products whose production and consumption were to be expanded.

Need it be remarked that almost any of these lines of action, except that of setting a pure equilibrium price, will involve disturbances of allocation of income as well as of resources, and these two aspects of the problem will be inextricably interwoven.

The first practical difficulty with such a procedure is, of course, that of forecasting the loan price that will accomplish the desired effect. This difficulty is made much greater by Dr. Schultz's proposal to announce it a year or more in advance. The writer would expect the public agencies undertaking such a venture to be in considerable trouble much of the time either because of having set the loan price too low and not having induced enough output in a poor-weather year; or because of having too large a stockpile from setting the loan price too high to avoid the other horn of the dilemma. An efficient procedure for disposing of surpluses would be an important part of the scheme.

The other practical difficulty is that producer groups will rarely be willing to accept as reasonable a loan price very close to the equilibrium point—especially in view of the circumstance that the equilibrium price under a guarantee is likely to be lower than the competitively determined equilibrium price. To assume otherwise is particularly utopianistic in the present situation. The procedure will encounter almost insuperable obstacles, therefore, except only in case an expansion of production is desired.

At this point, it is proper to remark that if the producer groups were really ready to accept the kind of prices that Dr. Schultz has in mind, there would be little difficulty in keeping production within the quotas. It is the insistence on pegging prices well above equilibrium by means of loans that has been making production overleap its bounds.

Assuming that producers would accept equilibrium prices, there is no significant choice between pegging production and letting prices go where they will and pegging prices and letting production go where it will. The major difference is that pegging prices would unstabilize incomes importantly; a large yield per acre times a set price (a price set before the crop was ever planted!) would make a high return, to be offset by a low return in a year of low yields. Under acreage control, the market automatically equalizes roughly the returns of good and bad seasons. Perhaps Professor Schultz has in mind some sort of pooling or insurance scheme under which farmers would not be paid for the surplus output of good seasons until later. Without it not only would incomes be unstabilized, but also producers' acreage responses to high and low returns per acre. (Here is an excellent illustration of how allocation of resources and of income can be put out of joint with each other by artificial measures.)

Also, under Professor Schultz's proposal, the government would be in a bad way if a big landslide in prices occurred as in 1920-21 and again in 1929-30. Setting prices as far ahead as he suggests would greatly increase this hazard.

Assuming that producers will insist upon and obtain clearly more than equilibrium prices, the public agency is in a better position to handle the situation with production control to help it, even assuming no greater measure of success with it than has been obtained, than with price-pegging loans only. Under the

latter, the only way out is an expanding program of surplus disposal to meet the expanding output.

The writer would begin his program at the consumption end, deciding first what changes in domestic consumption and in export disposal to try for, and what procedures to use to achieve these. He would then set production quotas large enough to supply these amounts and build up and maintain an ample reserve. He would then try to expand the consumption of the right foods sufficiently so as to raise the prices to producers of them to an equilibrium level higher than the present one. If any subsidies were to be used, he would apply them at the consuming end. In such a procedure, allocation of income and resources, in the sense in which Dr. Schultz uses these terms, would be largely harmonized.

The reason that allocation of resources and income are not harmonized in society generally is that we do not go far enough back with the allocation of resources. If the institution of inheritance were abolished, and all children given an equal chance to acquire health, education, and a start in the world, plus ample social security insurance, there would still need to be some supplementary distribution of income to care for the feeble of mind, body, and character; but it would be no large need. The writer fully agrees with Dr. Schultz that we need to concern ourselves more with incomes of the so-called "lower classes" in society; but he would like to see this handled by the allocation of more resources to them than by gratuitous allocation of income. This is the particular merit of the rehabilitation loan program of the Farm Security Administration. In the allocation of resources, the human kind of resources are more important than resources in land and capital goods. Professor Schultz recognizes this in his final pages. Mr. Tolley, however, outlines a well-rounded and well-conceived program for attaining it. Its shortcomings are that it does not correlate production and consumption adjustment closely enough to suit the writer.

Conceived in the manner of the last paragraph, the issue between allocation of resources and of income becomes largely a quibble over terms. In the more restricted sense in which Dr. Schultz uses these terms elsewhere in his paper, it is a valid criticism of several phases of the agricultural program that it has tried to make up deficiencies in income by raising prices and that this has caused misuse of land and other resources. Production control as such has more often checked these misuses than abetted them; but it has done both. The historical bases have been the worst features of it. The issue between price-pegging and production-pegging will need to be settled mostly on other grounds. The production-control program minus price-pegging loans, and minus the historical base feature, would improve land use generally.

In conclusion, it does not appear that Professor Schultz's particular brand of price-fixing for farm products has enough more merits than demerits to set it apart from those which have commonly been condemned in the past. It will achieve the ends desired without affecting the allocation of resources if the prices are set at or very near to equilibrium points; but the only interest in price-fixing which 90 per cent of the producers have is in obtaining prices from it that are clearly above these points—they want to allocate income with it. Only in case there is a social need for both more production and higher incomes for

the producers will the two allocations be in harmony. Such a need would derive from the welfare of the consumers. This is where agricultural adjustment should start in a majority of cases. The situations in which it should start from the production end are those in which irregularities in production (such as the so-called "production cycle"), or some change in land-use needs or in techniques of production, call for revisions of the production program. In both cases, the production and consumption readjustments need to be geared in with each other. To look at agricultural adjustment in these terms rather than in terms of prices as the springboard not only seems a more wholesome approach to problems of the national economy but is one which will meet less direct opposition from the commodity group interests involved. Professor Schultz would not set loan prices at cost of production any more than he would at parity, but if he starts fixing them at all by any form of direct action, he can expect that either these bases, or some other no better, will be forced upon him.

Perhaps, however, we do not need agriculture adjustment. Perhaps all we need to do is to let the farmers alone to work out their own destinies as they have done it in the past. It may broaden our perspective to put in contrast with the approaches of these two social economists that of a self-proclaimed "business economist." I cite selected items, sometimes in exact quotation and sometimes in paraphrase, from the new final chapter in Professor N. S. B. Gras's *A History of Agriculture*.⁶

The agricultural programs have been of the nature of charity and not "dignified self-help." "The pride of America has been wounded: its genius has been rebuked."

The solution of the farm problem is "unremitting labor, careful management, modesty, good-heartedness and independence"—especially independence.

America must choose social economics or business economics. The first sets up standards of equity, balanced living, and supervised work; the second, a strenuous living, independence, and "full citizenship in a nation of opportunities."

"Sink the departments of agriculture, agricultural experts, farm blocs, and all the rest of the crew that busily stands around to give the farmer a great deal of advice and a little help; sink all of them and still the business of agriculture will go on"—if the farmer as manager survives and functions.

Professors of farm management should ally themselves with those of business management in schools of business.

Mordecai Ezekiel is a "clever social reformer who has written in favor of agricultural economists and against business economists."

"The souls of millions of litters of pigs rose in plaintive cry, and the unborn souls of more millions merely stifled a sigh."

The book by E. Parmelee Prentice on *Farming for Famine* is the work of a scholar and a social philosopher.

The amount of produce to be stored in Secretary Wallace's ever-normal granary is "so small that the whole plan is doomed to failure."

The American farmer is losing part of his home market as well as his foreign market.

⁶ Second Edition, Crofts, 1940.

The devaluation of the dollar in 1934 raised the prices of domestic manufactured goods, but not those of export types of farm products.

A farmer should obtain his intermediate loans from the "Intermediate Rural Credit System."

Tenancy will grow on the better soils of America.

The habit of the farmer to buy, buy, buy, and his unwillingness to let "the progress of the town surpass his own," is a major cause of agriculture's difficulties.

A virile rural culture, largely uncontaminated by contact with the city, is needed as a bulwark of civilization.

"The New Deal is a cross between old-time political trickery, and a new-time childish faith in planning."

For the present, with so much war and national exuberance, regionalism is under eclipse, but there is a good time coming when the United States will be broken up into little nations each with its own tariff walls (and armies to protect them we may suppose).

THE STATUS AND ROLE OF PRIVATE INVESTMENT IN THE AMERICAN ECONOMY, 1940

(Two main papers and two review papers)

CONSUMPTION: A VAST UNDERDEVELOPED ECONOMIC FRONTIER

By THEODORE J. KREPS
Stanford University

The central thesis of this paper is that opportunities for investment in 1940 are virtually unlimited—unlimited, that is, provided measures to expand the buying power of consumers are vigorously pushed forward. In theory this is, of course, an old thesis, as old as the dictum that human wants are unlimited. But in practice it is also as new as recent hard-hitting programs to enlarge the effectiveness of human needs in the market place.¹ It is a thesis that has been repeatedly emphasized by the Temporary National Economic Committee from the opening day² of its hearings until the very end.³ An acute awareness of the fact that a vast frontier of potential economic expansion exists in the United States speaks forth from nearly every page of the thirty volumes of TNEC hearings and its forty-three research monographs.

The extraordinary complexity of the investment problem when broken down into its elements requires no elaboration. For obviously the question of "idle money" ramifies into consideration of such phenomena as the present extraordinary gold shipments from abroad; abnormal disturbances in international trade, foreign exchange, and capital and credit movements; changes in governmental and commercial credit policies; population movements and growth; security regulations; cost-price relationships, disturbed by the high prices of certain building materials and capital equipment; wage rates and labor costs; special situations in depressed industries; reduced purchasing power of agricultural or other groups; the relation of concentration of income to high savings; actual or anticipated levels of profits; confidence among businessmen and promoters; administered prices and dividend policies; taxes on business, on idle accumulations, and on consumer purchasing power; the massing of flows of savings into few hands;

¹ See Henry A. Wallace, *New Frontiers* (New York: Reynal and Hitchcock, 1934); also Thurman W. Arnold, *The Bottlenecks of Business* (New York: Reynal and Hitchcock, 1940).

² See the testimony of Isador Lubin and Leon Henderson, *Hearings before the Temporary National Economic Committee* (hereinafter called the TNEC), Part 1, "Economic Prologue."

³ *Vide inter alia* the remarks of Senator Joseph C. O'Mahoney, Chairman of the TNEC when opening the last series of hearings held, those on technology and the concentration of economic power. See also the testimony of the economic adviser to the TNEC on "America Unlimited," April 8, 1940, *Verbatim Record of the Proceedings of the TNEC* (Washington, D.C.: The Bureau of National Affairs, 1940) XIII, 3, 23, *et seq.*

centralization of investment decisions in relatively few executives; changes in apportionment of the gains from technological innovation; changes in interest rates; the effectiveness of barriers to new enterprise such as restrictive cartel arrangements in the building industry, or patents blocking investment as, for example, in the optical glass, magnesium, and beryllium industries; not to speak of social security, the New Deal, and especially national defense.

Consequently the present discussion will be rigidly limited to phases of the long-run investment problem. It does not deal with other phases nor does it consider the investment bottlenecks due to present armament expenditures. It looks at evidence on but two questions: (1) In recent years is inadequacy of plant and equipment an important factor limiting economic expansion? (2) What is the economic frontier most able to provide a large-scale permanent outlet for investment funds?

I

Abstracting from consideration the bottlenecks in capacity due to defense requirements, can one say that during the last few years America's capacity to produce was inadequate to support higher levels of output? The evidence on that question is contradictory. In some quarters there is still a considerable remnant of the type of discussion so markedly characterizing the dark days of 1932—arguments pointing to idle factories, railroads, and other industries operating at considerably less than full capacity. In short, some feel that, as soon as defense monies begin to flow less freely, underutilization of existing capacity will again be a challenging problem. They ask, why should we build more when we do not fully use that which we now have.

But others argue in diametrically opposite fashion. Thus in a recent speech before the United States Chamber of Commerce it was stated that:

Anyone who knows the experience of the smaller business enterprises scattered through the country is bound to be impressed by the number that have abandoned entirely an intended plan either for expansion or rehabilitation of their plant and equipment.*

This argument in so far as it has an economic basis implies that there is an effective demand for more goods than existing plant can provide. The product of more plant could be profitably sold. Yet businessmen are represented as afraid or unwilling to make the requisite investment. Along the same line, Dr. Harold G. Moulton, of the Brookings Institution, is reported in the *New York Sun* for January 6, 1940, as follows:

We do not need any new industries to lead us from depression to prosperity or to provide productive outlets for the savings of the American people. All that we require is an economic and political situation favorable to the resumption of capital replacement and

* Address of Emmett F. Connely, President, Investment Bankers' Association of America, before a General Session of the United States Chamber of Commerce, Washington, D.C., May 1, 1940.

expansion in existing industries. The expansion of capital required to replace depreciation and obsolescent plant and equipment and to raise standards of living even back to the 1929 level is sufficient not only to provide outlets for available money savings but also to absorb all our unemployment.

This contention was repeated with elaboration in his *Capital Expansion, Employment and Economic Stability*, published early in the summer of 1940. Less than three months elapsed, however, before the American economy was producing not only at 1929 levels but at better than 1929 per capital levels. Except for defense industries was capacity overtaxed? Apparently even Dr. Moulton does not think so for in October of 1940 at the General Motors Forum he is reported to have said:

Since in most lines we have unused productive capacity there does not seem to me to be any basic underlying economic reason why we cannot carry through the defense program without a general inflation of prices.⁹

In a similar vein the National City Bank in its *Letter* of December, 1940, states:

The country dreads an inflationary price movement, and there is no sound reason why such a movement should develop in view of the abundance of raw materials, the idle labor and capital and the technical resources that can be drawn upon to increase production. It is the reasoned judgment of authorities in the peace-time industries that they can supply prospective demands.

An economy able to produce at better than 1929 per capita levels and considered capable of taking care of defense requirements likely to be in excess of six billions next year can hardly be said to have let its productive capacity seriously deteriorate.

If there had been substantial undermaintenance of productive capacity the fact would have been the more remarkable, because businessmen, at least so the financial journals have repeatedly informed us, were or ought to have been afraid all along that governmental borrowing was bringing on inflation. If so, their first response, as in postwar Germany, would be to put their plant in tiptop shape against the day of higher prices.

Suffice it to point out that nowhere is there factual evidence to indicate a decline in aggregate productive capacity. Yet such a demonstration of actual decrease in capacity or of unsatisfied market need for more capacity is crucial to the validity of the point of view that the investment stream has been choked off.

For it is platitudinous to observe that businessmen will be reluctant to add to their present plant so long as it is adequate to fill the volume of orders coming in. Orders must be on hand or in prospect in such proportions as to promise to swamp productive capacity for some time to come before even the making of blueprints of extensions is authorized. Nobody wants capital equipment for its own sake. Except in special cases the demand for capital is ultimately a derived demand. Society wants steel

⁹ *New York Times*, October 20, 1940, p. F7.

mills and chemical factories because, and only because, and in so far as, they increase the abundance of consumers goods and consumable wealth.

This point, while a truism of elementary economics, has nowhere been more strikingly emphasized than by the Brookings Institution itself in its study, *The Formation of Capital*. Permit me to quote certain paragraphs from its "Summary of Conclusions":

The analysis of the evidence presented in this volume has led to the following conclusions:

1. The facts show conclusively that new capital is constructed on an extensive scale when consumption is expanding rather than when it is contracting. . . .

2. The evidence indicates that in a period when the output of both consumption goods and capital goods is being increased, there is an expanding flow of funds through both consumption and investment channels. . . .

3. The available evidence also supports the view that the growth of capital is directly related to the demand for consumption goods. First, changes in the direction of business activity in most cases appear to have begun with factors affecting the consumption side of the economic picture. Second, the growth of new capital is adjusted to the rate of expansion of consumptive demand rather than to the volume of savings available for investment. . . .

The primary need at this stage in our economic history is a larger flow of funds through consumptive channels rather than more abundant savings.

This analysis, it should be noted, was made only five years ago. Yet today, when the American economy has demonstrated that it can produce as much as it could in 1929, the contention is made (not speaking of defense needs) that there are businessmen who have funds and see bona fide investment opportunities but are afraid or unwilling to invest. Capital, in short, is being accused of having gone on a sit-down strike.

For this contention not one iota of concrete factual evidence is considered necessary. By implication those who reason in this wise charge businessmen with economic treason, and then omit giving a bill of particulars. Barring present wartime demand for machine tools, airplanes, tanks, tractors, armor plate, and shipping, let them specify the commodity so vigorously demanded as to overtax present producing capacity. What is the kind of plant that businessmen are refusing to build? Where would it be constructed? How many laborers would it hire? No survey has been made; no concrete details offered in proof.

On the other hand there is a vast amount of concrete evidence to show that businessmen have done just as good a job of making new investments where commercially needed in the thirties as in any previous period. In numerous industries plant capacity has been expanded severalfold since 1930, notably in the rayon, organic chemical, airplane, electrical refrigerator, synthetic plastics, nylon, Kraft pulp, technicolor, and air-conditioning industries and of course the manufacture and distribution of alcoholic beverages. Scores of new developments have taken place since 1930 exhibiting typically American business genius and daring: thirty-passenger, four-engine sleeper planes with 2,000 horsepower motors, one hundred octane gasoline, new methods of oil refining and processing, new continuous steel strip mills,

new textile fibres, synthetic rubber, sulphanilamide and sulphapyradine, synthetic vitamins and hormones, neon type lighting, television, fibre glass for insulation, glass textiles, and streamlined Diesel engine passenger trains, made of new steels and aluminum.

Examples in the chemical industry are particularly numerous. Thus E. I. du Pont de Nemours Co., Inc., state in a recent annual report⁶ that articles not in production in 1928 accounted for 40 per cent of their total sales in 1937. Among these new products are certain Duco finishes, Dulux enamels, neoprene, synthetic camphor, Ponsol dyes, anhydrous ammonia, synthetic methanol, urea, titanium pigments, and Cellophane. In 1927, they had only 10,700 workers making products like these; in 1937 they had about 18,000, a 70 per cent increase in employment. During the same period the company's investment in facilities for manufacturing these products increased from 65 million to 174 million dollars.

According to some schools of thought no industry would seem less attractive for new investment than the cotton textile industry. It is an old industry, one in which the Industrial Revolution began. In New England it is a declining industry. In the South complaint is made of such government regulation as the Wage-Hour Act. Yet in that very industry according to a recent analysis the number of new spindles installed in 1937 was nearly 2½ times as many as in 1929—773,000 as opposed to 321,000. The essential facts are shown below.⁷

TABLE I. CAPITAL EQUIPMENT PRODUCTIVITY IN THE COTTON TEXTILE INDUSTRY

	1929	1933	1937	1939
1. Spindles in place (000).....	35,267	31,442	27,700	25,987
2. Average active spindles (000).....	30,409	24,873	24,080	22,307
3. Spindles hours run (000,000).....	99,900	86,580	95,591	92,559
4. Cloth production (000,000 sq. yds.).....	8,399	7,866	9,446	9,146*
5. Cloth production per spindle.....	238	282	341	352*
6. Cloth production per average active spindle.....	276	316	392	410*
7. Cloth production per spindle hour run.....	.084	.091	.099	.099*
8. Index of cloth production per spindle hour.....	100	108	117	117
9. New spindles installed (including replacements)	320,784	348,568	772,724	349,416

* Estimated on basis of spindle hours run.

Notice that this industry has discarded more equipment than it has replaced. Yet with 21 per cent fewer spindles in 1937 actual production of cloth was more than 12 per cent above that in 1929. The central reason is, of course, the increase in productivity per spindle hour, 17 per cent if measured by cloth production; about 10 per cent if measured by cotton

⁶ For 1937, pp. 12-13.

⁷ "The Myth of a Profitless Prosperity," by Clinton Davidson, Jr., William H. Combs and Co., members New York Stock Exchange, 61 Broadway, New York, reproduced in *Verbatim Record of Proceedings of the TNEC*, XIII, 57-59.

consumption figures.⁸ The actual number of spindle hours run declined nearly 4.5 per cent but each spindle was used more intensively, the number of hours run per average active spindle increasing from 3,280 in 1929 to 3,970 in 1937 or more than a fifth. Clearly the cotton textile industry has increased its capacity by something more than 15 per cent since 1929.

But the dollar figures seem to tell an altogether different story. For the cotton textile industry spent only \$3,122,000 on plant and equipment in 1937 as opposed to \$3,596,000 in 1929.⁹ Total investment in fixed assets has also declined due in large part to extensive modernization, rationalization, and capital-saving innovation.¹⁰ The utilization of scientific management resulted in a host of economies put into operation particularly during the depression. In short, new machines are made to do more and better work. This experience is wholly familiar to consumers during the last ten years in their purchases of electric refrigerators, gas stoves, radios, plumbing equipment, and oil burners.

The extent to which capital-saving innovations, coupled with the failure of wage rates to rise as rapidly as productivity, have enabled American business firms to expand their productive capacity simply by expending depreciation and maintenance allowances, undistributed profits and obsolescence reserves, is shown by the experience of the Celanese Corporation of America. It increased productive capacity sevenfold with only a 137 per cent increase in fixed assets.¹¹

To infer from an analysis of dollar figures on obsolescence and depreciation that real capacity has declined may yield results that are far from reality. Dr. Spurgeon Bell, in a study entitled, *Productivity, Wages and National Income*, published by the Brookings Institution, shows that in recent years nearly every branch of industrial enterprise manages to get along with smaller amounts of fixed capital per unit of production.

By way of example, turn to a representative chart reproduced in Figure

⁸ Cotton consumption figures like those for cloth production make no allowance for variance in importance of cotton products over a period of time. But they are less subject to error in their collection. Their accuracy is not affected by variance in cotton yarn inventories. They are more inclusive.

⁹ Davidson, *op. cit.*, p. 58.

¹⁰ For a factual survey of the sweep of such innovation throughout American industry see David Weintraub, "Effects of Current and Prospective Technological Developments upon Capital Formation," *American Economic Review*, XXIX, 1, March supplement, 1939.

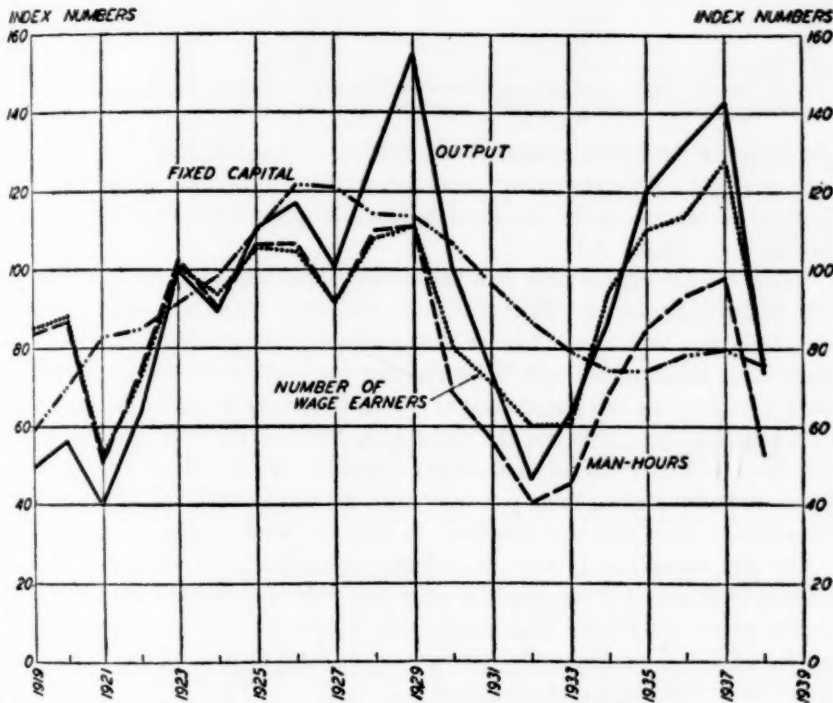
¹¹ In the annual report of February 29, 1940, p. 2, Mr. Dreyfus reports to the stockholders as follows: "Although actual production in 1939 was increased 700 per cent over production ten years ago, it will interest stockholders that this has been accomplished with an increase of only 137 per cent in Fixed Assets. This has been made possible mainly by our intensive maintenance and modernization policies. Maintenance expenditures absorbed in the cost of production in 1939 amounted to \$1,320,301.58 and for the past ten years to more than \$9,500,000.

"The Depreciation provision for 1939 amounted to \$1,876,860.02 bringing the ten year total to \$10,370,623.22. These charges have adequately provided for actual depreciation. The cash reserves which they create together with earnings retained in the business during the past ten years equal about 80 per cent of the \$25,000,000.00 (approximate) increase in our investment in *new production facilities*." Italics in original.

1. Notice that the automobile industry in 1938 had less than two dollars invested for every three dollars which it had invested in 1926, although output and capacity in 1939 exceeded output in 1926 by nearly one-third. Note that the total dollar investment began to decline in 1926.

Was this because managements in the automobile industry felt that the

FIGURE 1. Fixed Capital Investment, Output, and Employment in the Automobile Industry, 1919-38
(1923-25 = 100)



Source: Spurgeon Bell, *Productivity, Wages and National Income*
(Brookings Institution, 1940)

business outlook in 1926 was uncertain? Or were they afraid of the political situation? The reason could not have been "unsatisfactory" profits.¹² The General Motors Corporation earned 48 per cent on investment in 1927 and 45 per cent in 1928, being one of the most remarkable profit-earning enter-

¹² Of course it is not a current, high average rate of profit that stimulates investment. If it did, a boom would never end. Nor does a high rate attract enough capital to equalize the return with that in other industries. As Epstein's exhaustive study showed "the 'tendency' towards equalization of profit rates is not sufficiently strong to prevent differences exceeding 100 per cent between the average profit rates earned by considerable groups of corporations from appearing and maintaining themselves over a full decade." Ralph C. Epstein, *Industrial Profits in the United States* (New York: National Bureau of Economic Research, Inc., Publication No. 26, 1934, p. 587).

FIGURE 2. Fixed Capital Investment, Output, and Employment in Manufacturing, 1919-38
(1923-25 = 100)

RATES OF RETURN ON INVESTED CAPITAL FOR THREE MAJOR
AUTOMOBILE COMPANIES, 1927-1937

Year	General Motors	Chrysler	Ford
1927	48.77	43.49	-3.97
1928	45.75	34.91	-10.31
1929	37.02	19.37	13.73
1930	20.71	.71	5.79
1931	15.64	4.35	-4.93
1932	1.34	-6.86	-10.46
1933	12.57	15.68	-1.20
1934	15.19	11.10	3.75
1935	25.62	40.61	3.25
1936	32.82	61.12	3.98
1937	28.23	48.89	1.45
Average	25.25	23.59	.04

Source: Federal Trade Commission, *Report on the Motor Vehicle Industry*, Government Printing Office, Washington, D.C., 1939, pp. 487, 618, 671.

prises in the American economy. Chrysler showed a similarly "satisfactory" rate of return. Yet, interestingly enough, by far the greatest amount of new investment was made by the Ford Motor Company when it changed from Model T to Model A.¹³

Why did not capital flow into automobile enterprises? The buying public was pouring funds into their coffers in exchange for cars in such amounts that they not only made liberal charge-offs for depreciation but built up large cash balances as well. Why did not the lush profit attract a flock of new concerns? To ask the questions is almost to answer them. In the words of a popular song, why did the three little fishes swim back over the dam? Not because there was no room in the ocean but because those already there had a virtually impregnable position. Size and concentrated economic power constitute a most effective deterrent to new and small business.

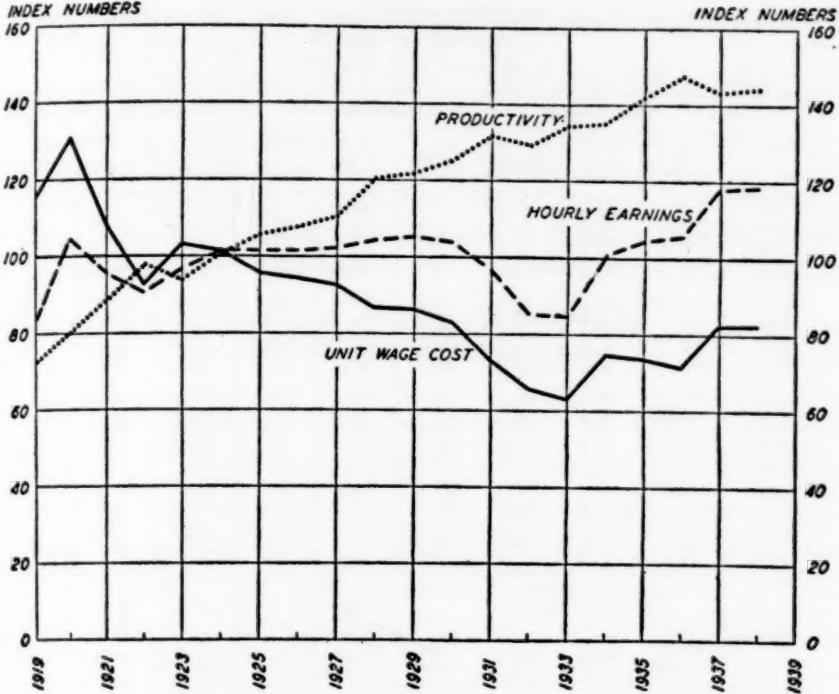
On the other hand, why should the retail trade be swamped with a continual flood of new entrants into the field despite the fact that the profits of retailing have been notoriously low and failures numerous? Part of the reason is undoubtedly the ease of starting a corner grocery and the belief in a fair chance at success.¹⁴

The extent to which the total amount of investment measured in dollars has gone down or failed to rise proportionately to output in recent years is shown in the Table II and Figure 2 below. Notice that in every industrial segment, whether manufacturing, automobiles, electric light and power, or textiles, more and more product is being produced with a given amount of investment in capital goods. If two years of similar prosperity are compared—1928 and 1936—an almost identical amount of product was put out in 1936 with 10 per cent less dollar investment in fixed capital. This

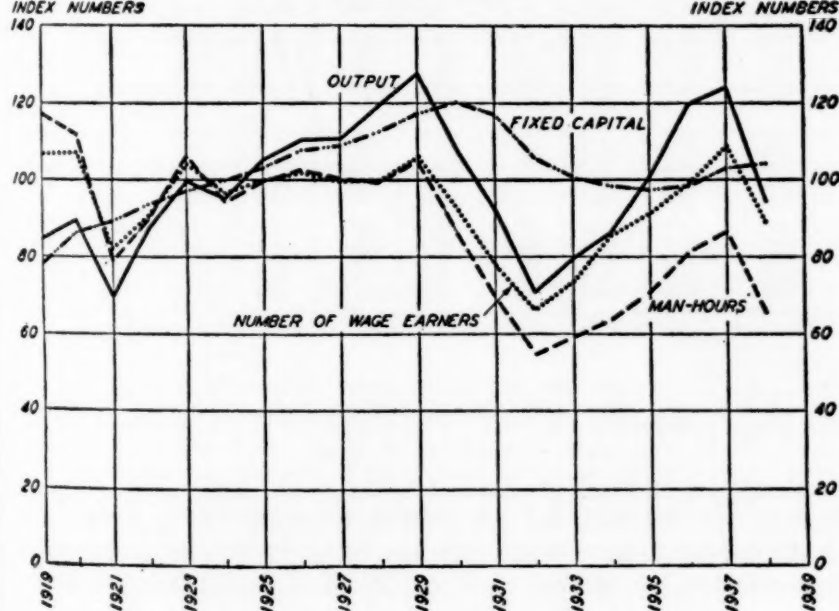
¹³ For a thorough discussion of the role of profits with respect to new investment see Martin Taitel, *Profits, Productive Activities and New Investment*, TNEC Monograph No. 12 (Washington, D.C., 1941).

¹⁴ See *Some Problems of Small Business*, TNEC Monograph No. 17 (Washington, D.C., 1941), especially Part I by John H. Cover, "High Mortality, Facts and Factors."

FIGURE 2. Fixed Capital Investment, Output, and Employment in Manufacturing, 1919-38
(1923-25 = 100)



Productivity, Hourly Earnings, and Unit Wage Cost in Manufacturing, 1919-38
(1923-25 = 100)



Source: Spurgeon Bell, *Productivity, Wages and National Income*
(Brookings Institution, 1940)

TABLE II. FIXED CAPITAL, UNIT WAGE COST, AND OUTPUT IN SELECTED GROUPS OF INDUSTRIES—1919-38
(Indexes: 1923-25=100)

Year	Manufacturing ¹			Class I Railroads ²			Electric Light and Power ³		
	Fixed Capital	Unit Wage Cost	Output	Fixed Capital	Unit Wage Cost	Volume of Traffic	Fixed Capital	Unit Wage Cost	Output
1919	78.1	116.4	84.8	90.3	110.4	95.5			
1920	86.2	130.9	89.5	92.2	130.2	105.3	66.1	97.9	65.2
1921	89.1	108.2	69.8	93.9	119.4	81.0	69.0	98.4	65.6
1922	93.6	92.5	87.7	92.3	104.7	85.8	72.1	90.2	75.1
1923	97.0	103.1	99.7	96.7	102.3	102.6	87.1	98.6	89.2
1924	99.9	101.0	95.0	100.8	100.6	96.3	99.5	104.8	98.9
1925	103.1	95.9	105.3	102.5	97.1	101.1	113.4	96.7	111.9
1926	107.6	94.3	110.4	105.0	94.8	107.0	127.5	98.7	124.8
1927	108.8	92.6	110.6	106.0	96.1	103.5	144.5	92.8	138.3
1928	112.7	86.5	119.5	108.3	93.4	102.8	158.4	87.4	151.7
1929	117.3	86.4	127.7	110.2	93.7	105.6	172.7	80.0	170.6
1930	120.1	83.0	107.6	109.4	93.7	90.6	185.4	81.3	176.8
1931	117.0	73.4	92.2	108.6	93.0	73.1	197.0	75.5	174.7
1932	105.9	65.8	70.9	107.3	86.0	55.8	202.2	65.7	160.8
1933	100.7	63.0	79.5	105.8	77.7	58.4	200.1	67.2	161.0
1934	98.3	74.6	86.4	107.0	78.5	63.4	196.1	66.5	172.5
1935	97.2	73.6	100.6	106.5	81.4	66.3	193.9	64.6	188.6
1936	98.3	71.5	119.5	103.7	78.4	79.5	192.8	62.4	215.3
1937	103.0	82.5	124.2	107.2	78.8	84.9	193.1	63.5	237.8
1938	104.1	82.5	94.3	106.9	82.6	69.1	198.7	62.5	238.9

Year	Automobile and Part Manufacturing ⁴			Iron and Steel Mfg. Industry ⁵			Cotton Textile Mfg. Industry ⁶		
	Fixed Capital	Unit Wage Cost	Output	Fixed Capital	Unit Wage Cost	Output	Fixed Capital	Unit Wage Cost	Output
1919	59.2	150.3	49.7	102.7	127.4	83.3	94.0	108.7	90.8
1920	70.1	160.5	56.2	103.4	120.9	103.4	95.0	139.7	89.9
1921	82.9	121.3	40.1	97.8	110.3	47.9	97.1	109.1	83.5
1922	84.9	103.8	63.2	99.8	81.2	84.0	98.0	91.6	96.8
1923	91.5	100.6	99.9	98.8	98.6	105.4	99.2	103.6	106.2
1924	98.5	101.2	89.4	99.2	108.7	88.3	100.2	101.6	90.1
1925	110.0	98.2	110.7	102.0	106.3	92.7	100.6	94.8	103.7
1926	121.7	89.4	117.1	101.2	90.0	113.8	99.6	93.0	105.9
1927	121.2	92.4	100.9	104.4	90.1	106.8	97.3	94.5	111.8
1928	114.5	88.3	128.9	103.4	81.4	123.0	94.3	88.2	100.2
1929	114.0	71.8	155.3	102.0	80.6	135.2	92.3	84.5	106.6
1930	106.9	64.9	101.1	106.7	87.7	99.5	90.2	87.6	79.2
1931	96.5	72.2	73.9	105.9	82.0	65.0	83.6	77.9	78.3
1932	87.0	83.2	46.6	107.2	76.1	35.8	79.8	60.7	72.3
1933	79.5	60.3	63.5	100.3	68.2	59.1	75.0	66.3	90.7
1934	74.5	77.9	87.4	97.0	82.9	66.0	74.4	87.4	78.0
1935	74.2	74.1	120.7	87.0	78.8	86.7	72.4	80.6	81.6
1936	78.8	77.5	132.5	83.0	76.8	120.5	71.6	72.7	101.7
1937	79.8	86.6	143.1	85.6	94.2	129.2	72.8	80.8	107.5
1938	75.8	93.5	74.0	78.0	94.1	71.9	70.6	78.4	85.2

SOURCE: Spurgeon Bell, *Productivity, Wages and National Income* (Brookings Institution, 1940).

¹ Pp. 269, 270.

² Pp. 271-273.

³ Pp. 275, 277.

⁴ Pp. 288-289.

⁵ Pp. 298-299. Fixed capital is an all-industry figure; output and unit wage cost data apply to Blast Furnaces, Steel Works and Rolling Mills.

⁶ Pp. 306-307.

tendency is particularly pronounced in the electric light and power, automobile, iron and steel, and cotton textile industries. The single exception is the railroad industry which not only lost traffic to competing forms of transportation but suffered from rigidity in its capital structure. Other-

wise the story is the same. A dollar's worth of capital produces a larger physical quantity of goods than it did formerly.

This cannot be explained on the grounds that the prices of capital goods are substantially lower now than in the late twenties, for such is not the case (See Figure 3). The prices of capital equipment and building materials have since 1937 been on a high plateau substantially at 1929 levels. In contrast prices in general are nearly 20 per cent lower.

Moreover, the fact should be remembered, as Professor Mills has pointed out, that the prices of capital goods were out of line even in 1929. They had

TREND OF WHOLESALE PRICES

UNITED STATES, JAN. 1929-MAR. 1939

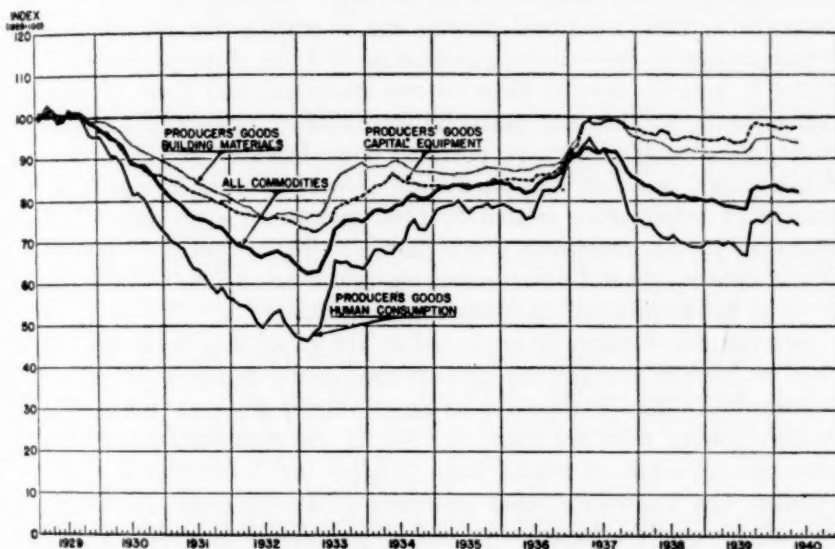


FIGURE 3

advanced 40 per cent in selling price per unit in the period from 1913 to 1929 despite the fact that production per wage earner had increased 69 per cent.¹⁵ This completely reversed the prewar situation. In Mill's words:

"From 1907 to 1908 when all commodities at wholesale declined 7 per cent in price, processed goods intended for use in capital equipment dropped 12 per cent. The prompt revival of demand and early recovery among industries producing capital equipment thereby stimulated constituted one of the major forces contributing to general economic recovery. Against this background of more or less conventional cyclical behavior the high prices of capital equipment during the 1921-22 revival and their recalcitrance after the 1929 recession were unexpected and disturbing. . . .¹⁶ The whole post-War period was

¹⁵ Frederick C. Mills, *Prices in Recession and Recovery* (New York: National Bureau of Economic Research, Inc., 1936), p. 432.

¹⁶ *Ibid.*, p. 144.

marked by economic frictions [heavy investment in overhead, price regulation, monopolistic and semi-monopolistic control, trade agreements, emphasis on nonprice factors in selling, extensive valorization efforts] that retarded the necessary adaptations to industrial change.¹⁷

"It is these frictions apparently inescapable today that prevent prompt and full utilization of technical improvements."¹⁸

These findings of Professor Mills are as true today as they were five years ago. Certain of the capital goods industries are continuing to price themselves out of the market. The real cost or exchange value of many investment goods is still high if not prohibitive despite the sterling efforts of the Antitrust Division in the Department of Justice. Nor can this disparity in prices be dismissed as being a result of decline in national income, presumably to be remedied automatically when national income rises. The disparity was there in 1929 and again in 1940 when national income was at peak levels. Cyclical variations in the amount of disparity may result in part from the decline in national income and in employment caused by some initial decline in investment expenditure. But the disparity between the prices in general, notably those of raw materials, and those of finished capital goods, is a long-run, persistent force that has operated for more than twenty years to place farmers, potential home builders, and investors at a disadvantage, reducing the purchasing power of their savings and the amount of employment created by their investment expenditure.¹⁹ High prices for certain investment goods coupled with low prices in other areas of the economy are still a formidable obstacle to attainment of full capacity levels of production and complete employment.²⁰

Nor can the disparity be explained on the grounds of high labor costs. Note in Table II that in every industry the pay-roll cost of a unit of output is lower today than in the twenties despite the well-known substantial increases in wage rates per hour. In 1937 in the manufacturing industries labor costs of a unit of output were 171½ per cent lower than in the early twenties. The figures for other industries show unit wage costs declining over 20 per cent on the railways and 37 per cent in the electric light and power industry. In addition, certain studies made for the Temporary National Economic Committee show that in these industries the pay-roll cost of a dollar of output has likewise been pared down.²¹

To return to the main argument: while aggregate dollar value of fixed plant has gone down, each dollar's worth is utilized more efficiently so that capacity has not gone down. No matter what industry one examines (ex-

¹⁷ *Ibid.*, pp. 462, 464.

¹⁸ In "Man and the Machine," *Today*, November 28, 1936, p. 30.

¹⁹ See Mills's notable discussion of this point in his *Prices*, *op. cit.*, p. 60 ff.

²⁰ Cf. Willard L. Thorp, *Economic Problems in a Changing World* (New York: Farrar and Rinehart, Inc., 1939), Chapter XV, "The Problem of Price Balance," especially p. 336 ff.

²¹ See especially Douglas V. Brown *et al.*, *Industrial Wage Rates, Labor Costs, and Price Policies*, TNEC Monograph No. 5 (Washington, D.C., 1940). Also H. Dewey Anderson, John M. Blair, and Lewis Lorwin, *Technology and Economic Balance*, TNEC Monograph No. 22 (Washington, D.C., 1941).

cluding those under the abnormal strain of defense requirements), one finds ample productive capacity, if not a vigorous remnant of that familiar fear of overproduction which has led the United States Chamber of Commerce and other business organizations repeatedly to express a desire for legalization of methods for "keeping production in proper relation to consumption."²²

Even the railroad industry, where undermaintenance and obsolescence of capital are uniformly considered most serious, has more than maintained traffic capacity. On that point a symposium of opinions of railroad executives given in the New York *Sun* on January 6, 1940, is emphatic. Said Mr. R. L. Williams, chief executive officer of the Chicago and North Western Railway:

Like other carriers all we need is sufficient volume of traffic in order to keep us in the black. For the plant is here.

Mr. G. D. Brooke, president of the Chesapeake and Ohio Railway, stated:

The principal problem of the railway is as it was 12 months ago, too low a volume of traffic.

Mr. A. N. Williams, executive vice-president of the Lehigh Valley Railroad, adds:

The railway plant has been maintained in good physical condition and it is being improved currently. The railroads are ready for more traffic when it comes. . . . It is true that retirement of obsolete locomotives and cars greatly exceeded installation of new equipment but we cannot escape the fact that the railroads now handle more traffic with less cars and locomotives.

In fact, the railway plant is even said to be adequate to meet war emergencies. On that point, Mr. M. J. Gormley, executive assistant of the Association of American Railroads, said as recently as May 6 of this year to the Society of Military Engineers in Washington:

. . . Since that time (1923) there have been no car shortages, the speed of freight trains has been increased over 60 per cent, average capacity of freight cars has increased approximately 20 per cent and number of gross ton miles per train hour have more than doubled. . . . Improvements in speed of movement and efficiency have been so great during this period that the freight traffic in 1929, the greatest for any year on record, could now be handled with from 350,000 to 400,000 fewer cars than were required at that time. . . . There were loaded in 1929 over eight million more cars of freight than were loaded in 1918, with approximately 60,000 less cars and 5,000 fewer steam locomotives. . . . The heaviest increase in traffic that ever occurred on the railroads occurred in the six months from May to October 1939, an increase of 55 per cent. . . . This peak traffic was handled without difficulty, without car shortages and without delay in unloading at destination. . . . If, in the event of another war, we could avoid the hysteria and retain the proper perspective. . . . no difficulty whatever will be encountered in providing adequate and satisfactory service.

To summarize: no concrete factual evidence exists that the American industrial plant is unable to put out as much as it could in 1929 (which was about 20 per cent more than it did produce) or that there is not

²² See successive issues of its pamphlet, *Policies Advocated by the Chamber of Commerce of the United States*, 1939 edition, p. 5 ff.

ample capacity in the economy to produce a national income at current price levels of ninety to one hundred billion dollars.

II

If businessmen have not allowed efficient productive plant seriously to deteriorate and if no substantial backlog of undermaintenance exists, what is the economic frontier most likely to provide a large-scale outlet for investment funds? In my judgment it is consumption. While to be sure, more capacity is needed in certain defense industries, abstracting them from discussion and considering the basic long-run problem, what industries need is not more capacity but more market. In the words of the *National City Bank Letter* for April of 1940:

The best hope of sustained capital expenditures is to be found in sustained trade, export or domestic. If trade holds up, investment will be induced.

The market is the frontier. It is obviously an intensive rather than an extensive frontier. It is the frontier represented by the needs and will to progress of our own citizens. Its importance has been pictured in glowing terms by the editors of *Fortune* as follows:

The tools and extensions of industrialization do not exist for their own sake. They exist for . . . the consumer. The entire producers'-goods industry, for instance, whose purpose is the making of tools, is quite secondary to the real purpose of industrialization. That real purpose may be defined as *an increase in the power to consume*. . . .²²

The central economic problem is not a revival in the producers' industry, although that would help. Nor can it be a revival in "investment" in the old sense of the word. The central economic problem is simply the conversion of a high potential power to consume into an actual power to consume: a wider distribution of progress.

The great differential that links potential and actual consuming power is *price*; and what the new era cries for is a drastic decline in many lines of industrial prices. . . .²³

Emphasis has been put on the need for confidence in making new investment; but . . . this emphasis is both unrealistic and academic. The realistic requirement is, rather, that the business man should have *confidence in the consumer*: he must have confidence that if he decreases his prices and his profit margins he will get a corresponding rise in volume.²⁴

In the consumer lies the frontier. . . . By industrialization we build a new civilization. And during the last fifteen or twenty years, by further industrialization, we have created the possibility of an entirely new era for mankind. It is time now to get to work to make that era a reality.²⁵

Postponing for a moment the question whether the only implement required to develop this frontier is a lowering of prices, let us consider its magnitude. In Figure 4 is exhibited the familiar pyramid showing income levels in the United States. Eight million families have incomes of less than \$750 a year. Eleven million families receive incomes between \$750 and \$1,500 a year. These families, representing in the aggregate 60 per cent of our population, constitute a vast incompletely developed economic ore body ready for intensified pioneering. The needs of these nineteen mil-

²² *Fortune* (February, 1940), XXI, 2, 50.

²³ *Ibid.*, p. 160.

²⁴ *Ibid.*, p. 163 (italics in original).

²⁵ *Ibid.*, pp. 145, 164.

lion families are stupendous; more than a third are ill-fed, ill-clothed, and ill-housed.

The vast possibilities for expansion of private enterprise inherent in these facts have been repeatedly emphasized by the Temporary National Economic Committee. On the opening day of its hearings one of its members, Dr. Isador Lubin, sketched in graphic terms the potential markets for business at home. Even if so modest an expansion of domestic trade were pushed as that which would result from the increased purchases which those families getting \$1,250 or less would make if they could earn about \$1,500, the amount of new business would be stupendous. He estimated an increased annual expenditure of 800 million dollars for food; 416 millions for clothing; 613 millions for rent; 213 millions for fuel, light, and refrigeration; 224 millions for household furnishings; 385 millions for transportation; 234 millions for recreation; and 208 millions for medical care.²⁷ The TNEC has continually kept in mind the challenging picture of this vast underdeveloped frontier freely open to American business without barrier of language or economic philosophy or military might.

But the fact is also abundantly evident in the seventy-odd volumes of TNEC hearings and monographs that the task of developing this frontier will require greater courage, initiative, and reliance upon scientific knowledge than has the accomplishment of such gigantic engineering feats as the construction of the Boulder Dam or the Triborough Bridge. No one measure will do the job. Flexibility of prices, for example (however defined), while helpful both in easing cyclical adjustments and in lifting real national income to higher levels is important but by no means the only desideratum.²⁸ For, to mention but a few of the more important co-ordinate factors, the real incomes of the nineteen million families who get less than \$1,500 a year can also be increased by taking some of the tax burden off their shoulders.²⁹ Moreover, merely by lowering or removing the tariff on items in which four firms control 75 per cent of the output, these families can be freed from a further toll of billions of dollars.³⁰ Again in some instances government competition may be necessary to stimulate the adoption of dynamic price policies such as those which have made relatively poor communities in the Tennessee Valley rank high in average consumption of electrical energy and in per capita purchases of power-driven house-

²⁷ *Investigation of Concentration of Economic Power*, Hearings before the Temporary National Economic Committee, Part 1, "Economic Prologue," pp. 74-76.

²⁸ See Saul Nelson, Walter Keim, and Edward S. Mason, *Price Behavior, and Business Policy*, TNEC Monograph No. 1 (Washington, D.C., 1940).

²⁹ It is estimated that a larger percentage of their incomes goes for taxes than of the incomes of any group except those getting over \$20,000 a year. See Gerhard Colm and Helen Tarasov, *Who Pays the Taxes?* TNEC Monograph No. 3 (Washington, D.C., 1940).

³⁰ Dr. James estimates that the tariffs on sugar and rayon alone cost American consumers between a quarter and a third of a billion dollars a year. See Clifford James, *Industrial Concentration and Tariffs*, TNEC Monograph No. 10 (Washington, D.C., 1940).

INCOME LEVELS IN AMERICAN LIFE*

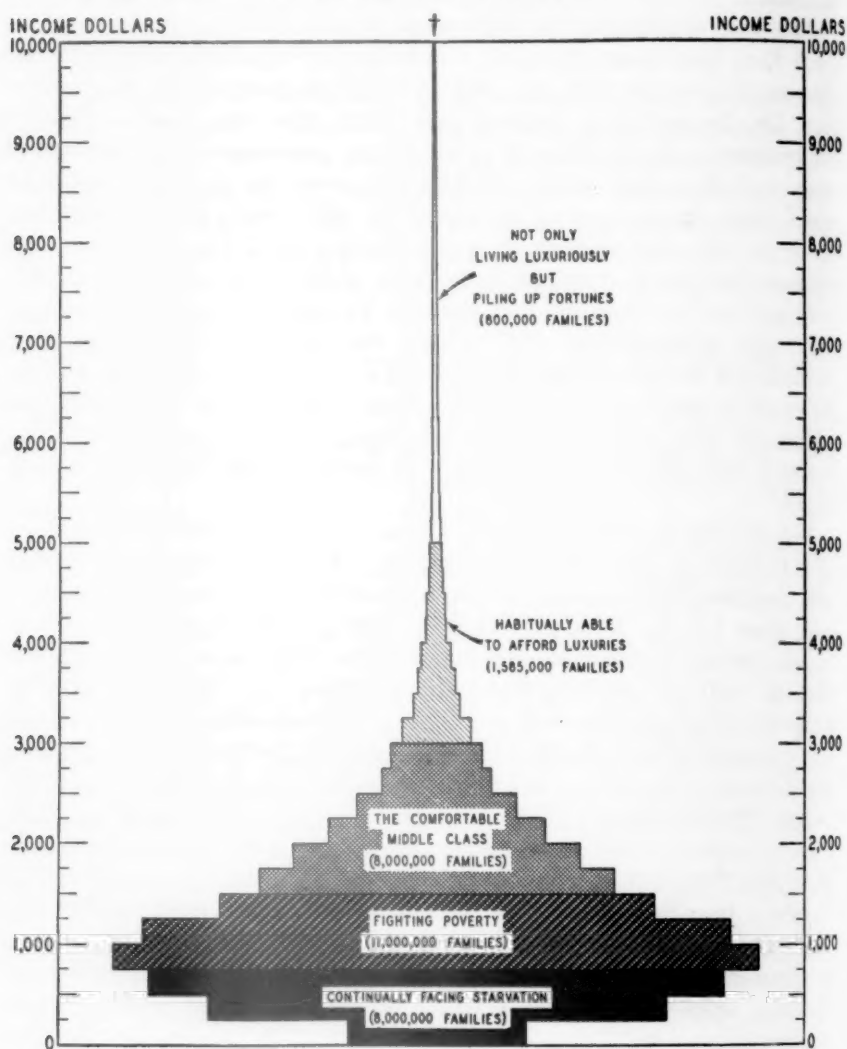


FIGURE 4

* For basic data and methods see *Social Education*, Stanford Education Conference (Macmillan Co., 1939), Chapter VII, "Welfare Levels in American Life."

† 283,000 families with income over \$10,000 get as large a share of the total income as nearly 11,000,000 families at the bottom. The largest income, that is, the highest point of this pyramid if drawn on a vertical scale 1" = 1,000 dollars, would be 350 feet higher than the top of this chart.

hold equipment.³¹ Fuller utilization of capacity and larger consumption can also be brought about by more intelligent policies on the part of public utility commissions, milk control boards, and the like.³² Similarly, vigorous antitrust action in eliminating artificial restraints may help to bring about lower prices and fuller employment.³³ Other TNEC studies too numerous to mention, such as those on consumer standards, on government purchasing, on housing, and on patent laws, might be cited to show the varied types of policy—financial, fiscal, industrial, agricultural, labor, and governmental—that require integrated orientation in conception and operation toward the goal of enlarging consumption. In short, whatever increases the efficiency and productivity of those millions of workers with incomes of less than \$1,500 a year, whatever increases the money income they earn, whatever stretches the buying power of the money they receive—will tend to widen the market bottleneck and enlarge the flow of real national income and employment.

Basically all talk about the needs of the underprivileged masses is without vital significance unless accompanied by suggestions for implementing such needs with purchasing power. For while savings and expenditures for consumption are functions of national income, investment is not. To translate consumer needs into effective demand, therefore, requires either a change in the present pattern of income distribution or an increased advance of purchasing power through private and governmental investment.

That the present pattern of income distribution makes for high savings requires no elaboration. As is clearly shown in Figure 5, savings are a function of income. Moreover, precisely when and in the measure that the amount of goods produced reaches new levels, the incomes of those who do nearly 90 per cent of the consuming (those getting less than \$3,000 a year) increase less rapidly than the incomes of those who manage to do about 85 per cent of all accumulation (those getting over \$5,000).³⁴ Furthermore, corporate directors in the measure they successfully discharge their trusteeship toward stockholders and bondholders are likely to try to maintain dividends and interest payments relative to pay rolls, thus increasing the relative abundance of funds in the hands of those whose wants for consumption goods are most close to being satisfied. For dividends and interest go to relatively few. Even the two hundred largest nonfinancial corporations with widest public distribution of their securities are owned

³¹ See Richard Hellman *et al.*, *Government Competition with Private Enterprise*, TNEC Monograph No. 37 (Washington, D.C., 1941).

³² See Donald H. Wallace, Ben W. Lewis *et al.*, *Economic Standards of Government Price Control*, TNEC Monograph No. 32 (Washington, D.C., 1941).

³³ See Walton H. Hamilton and Irene Till, *Antitrust in Action*, TNEC Monograph No. 16 (Washington, D.C., 1940).

³⁴ See Adolph J. Goldenthal, *Concentration and Composition of Individual Incomes*, TNEC Monograph No. 4 (Washington, D.C., 1940).

almost altogether by those with incomes over \$2,000 a year. Half their stock is owned by about 75,000 persons.³⁵

A striking example of the manner in which habit patterns of economic conduct tend to exacerbate the problems of idle men and idle money is shown in Figure 6. As is well known, the directors of the American Telephone and Telegraph Company represent the elite among American executives, being businessmen of highest integrity, intelligence, and social sympathy. Yet note in the upper portion of Figure 6 that the funds which

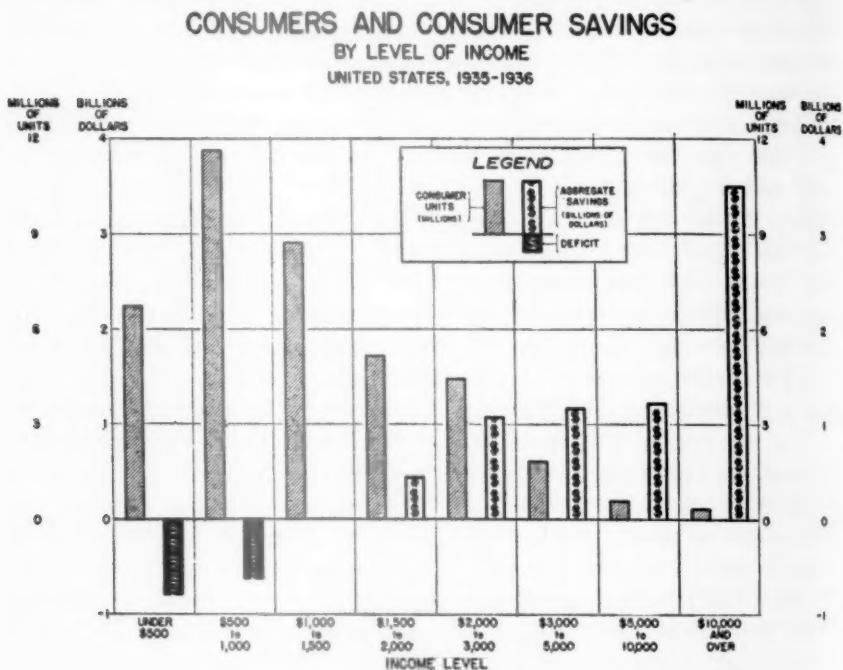


FIGURE 5

this corporation collected from the public increased more rapidly than did production; that is, when expressed in terms of what customers had to sacrifice in effort and goods in order to get hold of the dollars wherewith they met their telephone bills. In terms of exchange value telephone services are costlier even now than in the period 1923 to 1925. Notice that employment has declined, more than 100,000 persons since 1929 having been thrust on the rest of industry or on private and public charity. More than three-fourths of these were employees of relatively low income, as, for example, telephone girls displaced by dial mechanisms. Turning to the bottom

³⁵ Division of Research, Securities and Exchange Commission, *Distribution of Ownership in 200 Largest Non-financial Corporations*, TNEC Monograph No. 29 (Washington, D.C., 1940).

SOCIAL PERFORMANCE OF THE BELL SYSTEM*

UNITED STATES, 1919-1938

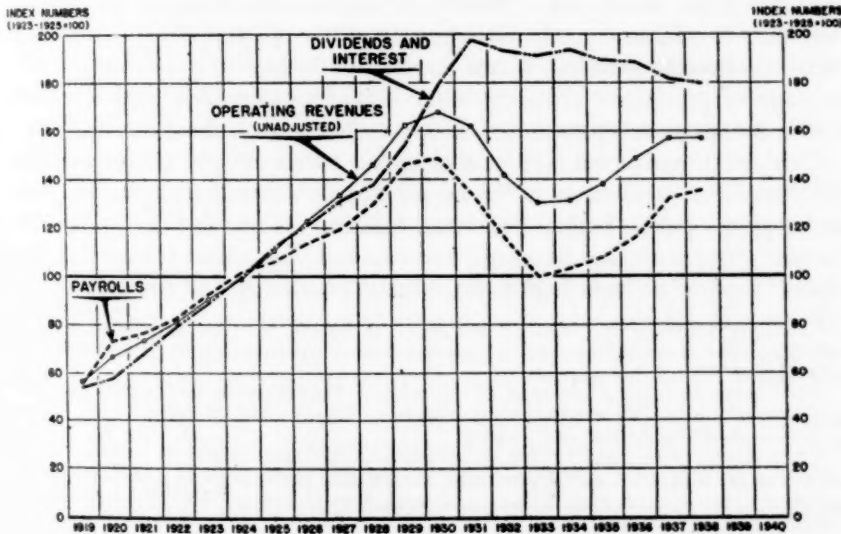
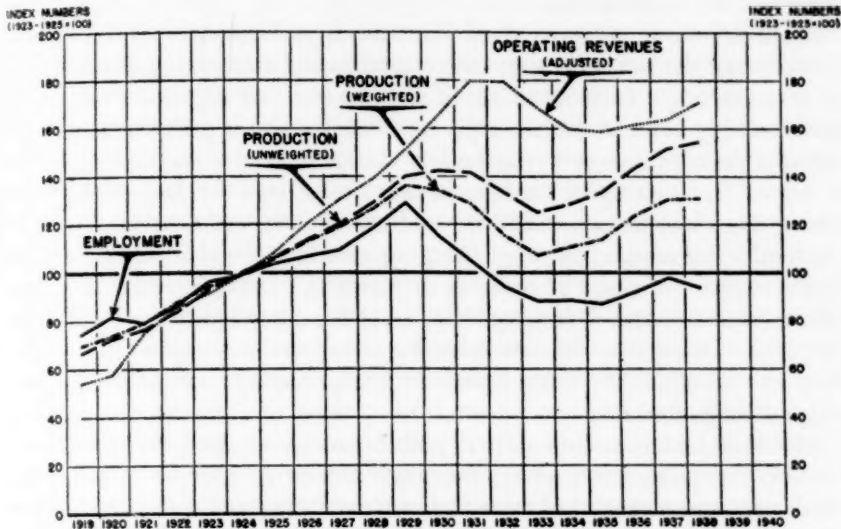


FIGURE 6

* For data and discussion of methods see Theodore J. Kreps, *Measurement of Social Performance of Business*, TNEC Monograph No. 7 (Washington, 1940), especially Table XXXIV, Appendix B.

portion of the chart, note how a smaller proportion of consumer funds absorbed³⁶ is paid out in pay rolls. A strikingly larger proportion goes to dividends and interest. Yet the telephone industry in order to operate fully and effectively requires that multitudes of users have incomes wherewith to meet small monthly telephone bills. It collects purchasing power from millions and disburses it to the few.

That, of course, presents afresh the central problem; namely, how such distortion of the income stream can be corrected. A thorough-going revision of taxation might help, especially if it were one that repealed or lowered taxes causing unemployment, e.g., taxes on consumer purchasing power, and if it imposed or raised taxes on lazy dollars so as to stimulate them to go to work.³⁷ A lowering of the interest rate would have the dual effect of reducing high-income accumulations and stimulating more investment. To cite but one example, by thus bringing monthly rental charges on new homes within the range of millions of persons of lower income,³⁸ housing activity is stimulated. Other possibilities readily come to mind whereby the proportion of national income spent by consumers is increased. This was done in recent years by Great Britain.³⁹ Then, of course, one no longer has a high-savings economy.

The resistance to such a shift in patterns of income and expenditure is, however, unquestionably great, running head on into the most sensitive, vociferous, and powerful of vested interests and likely to incur consequences of disturbing proportions. Two palliatives—or perhaps three—remain. The first is that of letting the excess savings be placed in more plant and equipment: in short, under present conditions (not considering national defense) to add to capacity already only partly utilized. Thus in the past railroads became streaks of rust in the wilderness. To encourage such wastage of productive resources while millions of families have less than \$65 a month seems paradoxical if not cynical and sardonic.

The second palliative is to let such excess savings be put to work raising the American standard of living by community consumption projects such as hospitals, public health, vocational training, food subsidies to the low income groups, old age pensions, low cost housing, slum clearance, public parks, airports, express highways, cultural education, and the like. If we

³⁶ Roughly equivalent to "income produced" as defined by Professor Simon Kuznets and the Department of Commerce in their estimates of national income. "Value added by manufacture" is a kindred concept.

³⁷ For a thorough-going inventory of the impact of taxation on employment and suggestions for amelioration see H. Dewey Anderson, *Taxation and Recovery*, TNEC Monograph No. 20 (Washington, D.C., 1940).

³⁸ Thus Great Britain and Sweden stimulated housing booms largely by enabling home-owners to get funds at 3 and 3½ per cent. For the vast possibilities in American housing see Peter A. Stone and R. Harold Denton, *Toward More Housing*, TNEC Monograph No. 8 (Washington, D.C., 1940).

³⁹ Colin Clark has estimated that the proportion of national income saved there has been reduced from 13 per cent before the World War to 7 per cent in 1936. See his *National Income and Outlay* (London: Macmillan and Co., 1937), p. 185.

should catch the vision of building an American civilization, we could create employment for millions, as did Sweden, in providing, to use their national slogan, "more beautiful things for everyday life." In every city an art center, an opera house, with native schools of painting, sculpture, woodwork, handicraft ware, music, and literature; in every home and school and public building examples of native American artistry; but above all an adequate supply of the elementary requirements of food, clothing, medical care, and shelter for the nineteen million families living on less than \$30 a week—these would seem to be indeed worthwhile consumption projects.

But such notions must be considered with utmost care and caution. For the exploration of the consumption frontier requires thought, not brawn; the apprehension of new ideas rather than new public lands. It requires pioneers with economic vision able to get outside their usual orbit of thinking and self-interest. Here are some truly gigantic bridges to be built—economic bridges connecting the needs of these families with their ability to earn and purchase the goods which our superb machines can produce.

The pioneering here required is, however, a kind of pioneering with which the American people are by no means unfamiliar. To cite but one example: our genius in inventing and putting into practice the idea that all the children of all the people should be educated has led to an investment in plant in every corner of the United States and created jobs for millions. In similar fashion compared with one hundred years ago we now have public streets, roads, canals, water, street lighting, and drainage systems, libraries, museums, homes for children, the aged, and insane—not to mention the many other services which pioneers insisted on providing co-operatively for themselves as they conquered the wilderness. An extension of community consumption projects carries on one of the most cherished of American pioneer traditions.

A third palliative is now unfortunately in process of being tried. That is the absorption of idle money, idle plant and idle men in public expenditures for the implements of death. This is likely to be the most important factor affecting the status of investment not only in 1940 but for some years to come.

It is needless to emphasize that the requirements of national defense change neither our economic objectives nor the nature of the bottlenecks that prevent full production nor the usefulness of the well-tried means of removing them. Our objective still is the objective set by the President before the Temporary National Economic Committee:⁴⁰ the further development of a stronger and more vigorous economy in which free private enterprise provides the maximum quantities of goods and services at the lowest possible prices with the greatest possible efficiency.

⁴⁰ Message from the President to the Congress of the United States transmitting recommendations relative to the strengthening and enforcing of antitrust laws, April 20, 1938.

The ordinary bottlenecks and artificial restraints upon prices and production are likewise not changed by the need for national defense, except that they are more dangerous. Programs of managed scarcity, of maintained prices, and restricted production, far from ceasing to operate, can command, and in the past have commanded, greatly increased toll. The record of millions amassed by special groups and by large monopolistic organizations before and during our participation in the World War is still vivid in memory.

Similarly, the removal of bottlenecks, while always highly beneficial, is now urgent. A balanced price structure, while desirable in time of peace is vital in times like these, otherwise hysteria, haste, confusion, sudden spurts of unco-ordinated governmental buying together with monopolistic manipulation will bring inflation, excessive governmental debt, and ultimately a disastrous postwar collapse. Competent observers such as Bernard Baruch⁴¹ have pointed out that the last World War cost the United States government at least twice as much as it should have cost—at least twice as much as it would have cost had a sound program of finance, taxation, and price control been followed.

Thus, to take but one example, the well-tried methods for maintaining a balanced price structure now require intensified use. Far from relaxing the antitrust laws, as was done in 1917, we must the more alertly enforce them. To pay increased prices for lumber, zinc, copper, armor plate, and airplanes while confiscating the only thing a laborer has to sell—his services—is rank injustice. When the Antitrust Division under Thurman Arnold breaks up artificial restraints in housing and in the food and milk industries, it can hardly be said to aid in making the nation inefficient in producing munitions or airplanes. On the contrary it helps to keep down rents and the cost of living. Let us hope that the economic stupidities of 1917 are not repeated. To allow rising prices to reduce workers' standards of living below present levels and permit lush defense profits to generate another crop of war millionaires not only aggravates the consumption-investment problem but permits economic injustice which destroys morale. It breaks down the integrity of the home front. It makes the laborer and the draftee feel like deluded victims of a grim hoax.

Far from being a time to postpone action designed to develop the consumption frontier, now is the time when the necessity of producing at maximum capacity should spur on redoubled efforts. For unless a well-conceived integrated program of economic adjustment beginning with tax reform is started and carried out, the full employment and full utilization

⁴¹ In Hearings before the War Policies Commission Mr. Baruch said in part: "Our total war expenditure was \$39 billion incurred in terms of 1917, 1918, 1919, and 1920 dollars. In terms of the purchasing power of 1913 dollars it would have been only \$13 billion, or in terms of 1930 dollars probably not more than \$15 billion." *House Documents No. 163, 72d Congress, 1st Session (Washington, D.C., 1931), p. 33.*

of plant capacity which the billions of defense monies bid fair to bring about within the next twelve to eighteen months will inevitably be followed by a severe reoccurrence of the economic distress which followed the last war. There will be new spasms of underproduction and unemployment. The economy will again operate at pathologically low levels of utilization of productive capacity. The hour for renewed action has struck. Consumption must cease to be an underdeveloped economic frontier.

PRICES, COSTS, AND INVESTMENT

By RICHARD M. BISSELL, JR., *Yale University*

1. *The Function of Private Investment*

The role of private investment in the American, or any other other, economic system has been made sufficiently familiar in the literature of the last ten years so that it requires comparatively little comment. Generally speaking, investment performs two entirely different functions. First, its actual purpose when it is undertaken is always to expand or improve productive facilities, to create good will and other similar economic advantages for the investor, or to construct other sorts of assets which may be durable or non-durable, real or otherwise. Second, private investment serves as one of several offsets to saving. As such, its function may be said to be that of securing continuity in the flow of the income stream.

In the long view, it may be that the former of these two functions is the more important. But for the last ten years, judging by the articles that have appeared in the technical journals, the majority of economists have been more interested in the latter. Their concern with the volume of unemployment and the relatively small size of the national income has focused their attention upon the savings-investment relationship, the size and nature of the several types of expenditures that offset saving, and the problem of maintaining or expanding the volume of such expenditures.

This paper is another essay on the same set of problems. They can, of course, be approached from two directions, for the extent to which it is necessary to stimulate autonomous income-creating expenditures depends upon the relationship between saving and income. The nature of the saving habits of the community constitutes, therefore, one side of the problem. This paper is, however, limited to the other. The nature of saving habits will be taken as given. No attempt will be made to inquire what rate of investment would have been necessary during the thirties or will be necessary during the forties to bring about reasonably full employment. In terms of public policy, we shall not discuss the desirability of a higher rate of consumption as an alternative to a larger volume of expenditures that offset saving. Nor shall we consider the relative merits of public and private investment as offsets to saving. In more positive terms, the principal subject matter of this paper is the role of costs and prices in investment decisions and their importance in relation to the several factors that govern the volume of private investment. By way of introduction it will be well to indicate what the other factors are and what issues of emphasis have been prominent in recent years so as to place this discussion of a particular set of variables in its proper background.

A discussion of investment decisions may conveniently be opened with

the proposition that the rate of investment in general as well as each separate investment decision depends upon (a) the cost of capital funds and (b) the probable rate of return that could be earned by investing them in new real assets. It is apparent that both the supply of and the demand for capital funds depend, in turn, upon many elements of the economic situation. Nevertheless, it is both conventional and convenient to treat the rate of interest, i.e., the supply price of capital funds, as one of the basic determinants of investment. When the term is used in this fashion it must be thoroughly understood that it is being used as an index of the availability of various types of capital funds to various potential investors (which depends upon a number of circumstances, not merely on the actual money rate charged by the lenders). Turning to the demand side of the capital market, we may designate three other determinants which influence investment decisions via the probable rate of return on new assets. One is the size and composition of the income stream. Another is the nature and extent of technical investment opportunity. The third is not one but really a whole series of factors which may be grouped together under the heading "cost-price relationships." In the list of four, these are, respectively, the second, third, and fourth.

In business cycle theory, both professional and popular, the second of these factors has always been emphasized in connection with explanations of the cumulative nature of both the upswing and the downswing. Only two comments need to be made on its operation. First, it is scarcely necessary to point out that the size of the income stream is significant only in relation to the volume of existing capital assets. Second, it should not be lost sight of that the composition of the income stream as well as its size is important, also, in relation to the characteristics of the existing capital stock. A change in consumers' tastes and consequent shift in demand can stimulate investment just as effectively as an increase in total demand.

The third factor, technical investment opportunity, requires a little explanation, although it has been emphasized by every historian of the trade cycle and has come into particular prominence in recent work by Hansen, Weintraub, and others. There is no doubt that the rate of investment depends, among other things, upon the nature and condition of the real capital assets in existence and what is technically feasible. If new inventions have recently been developed to the point where they are commercially practical but have not yet been exploited or if capital assets have been consumed or rendered obsolete and not yet replaced, then the economic system may be said to be in a strong "technical position" so far as the prospects for investment are concerned; i.e., it may be said that there are ample technical investment opportunities.

In analytical terms, technical investment opportunity depends on the relationship between the forms of production functions and the existing stock

of real assets, and is, therefore, independent of the values of purely economic variables. A new innovation constitutes, analytically speaking, a change in existing production functions or the appearance of entirely new ones representing the technical possibilities open to new producing units. Thus, any innovation is bound to affect technical investment opportunity.

Of course, the way in which technical investment opportunity influences the rate of investment is related to the way in which the level of economic activity operates upon it. But the two factors can be distinguished. Technical investment opportunity may be said to be determined by the relationship between the *form* which the community's capital assets actually have and the form which they might have in the light of current technical possibilities. On the other hand, the second factor mentioned as a determinant of investment, the size and composition of the income stream, is significant in relation to the *quantity* of the community's assets rather than in relation to their nature. An increase in economic activity or a change in habits of living stimulates investment because it narrows the gap between actual output and capacity output while a new invention stimulates investment because it creates or widens the gap between the actual and the most profitable form of the community's capital assets.

The last of the four factors that influence investment decisions is the state of costs and prices. It goes without saying that the expected rate of return which could be earned on the funds invested in a newly acquired asset depends upon the expected state of demand for the product which could be turned out with its assistance, the expected cost of those types of input that would have to co-operate with it in order to yield a flow of output, and upon the values of other strictly economic variables. To recapitulate, then, four factors may be listed as the ones that control the rate of investment. They are the rate of interest, the size and composition of the income stream, technical investment opportunity, and costs and prices. Of the four, the first, second, and fourth are economic; the third is technical.

By contrast with much recent economic thought, the role assigned to this fourth factor, i.e., to cost and price changes, in certain earlier theories of the trade cycle deserves special emphasis. The self-perpetuating character of the business cycle has been explained, wholly or in part, by the argument that during a boom the structure of costs and prices becomes distorted until maladjustments accumulate which bring about a decline in the rate of investment and which then have to be eliminated during a period of depression before there can be a revival.

In terms of the above list of factors which influence investment decisions, at least two attitudes may be defined which differ from the one just outlined. One arises from emphasis upon the importance of income as a deter-

minant of the rate of investment. The acceleration principle embodies in analytic terms the reasoning upon which this attitude is based. It has been used to justify the theory of pump-priming in its cruder form. The second is that which arises from emphasis upon the importance of technical investment opportunity as a determinant of the rate of investment. Hansen, especially, has argued that the economic stagnation of the last ten years is, in part, a result of the fact that the American economy has been approaching a state of maturity characterized by the relative scarcity of investment opportunities.

It would be inaccurate to say that those economists who have emphasized the importance of income and of technical investment opportunity as the determinants of the rate of investment have entirely disregarded the part played by costs and prices. But economic literature in the Keynesian tradition contains few references to such matters. Its authors appear to regard the other factors governing investment decisions as the more significant ones. In short, there is at least tacit disagreement on the function and importance of costs and prices.

It may not be possible to resolve an issue stated in such general terms at all; nor is it highly important to do so. But the mere definition of the issue does raise certain questions concerning the determination of the rate of investment which are of considerable interest from both a theoretical and a practical point of view. What are likely to be the effects of changes in prices upon investment decisions? In particular, what sorts of changes in costs and prices would be stimulating to investment? How certain is it that they would have a stimulating effect? Upon what factors do the effects of price changes depend? These questions constitute the principal subject matter of this paper. Until something is known of the answers to them it is impossible to appraise intelligently the part that is played by costs and prices in investment decisions.

2. Price Relationships and the Method of Analysis

Since the purpose of this analysis is to examine the consequences of different price policies by describing what would happen if prices were altered, discretion requires that the complex problem of how prices are determined be avoided as far as possible. The procedure will be, therefore, to assume that certain price changes occur autonomously, i.e., without prior cause, and then investigate the results. These will depend, among other things, upon the type of price that changes. (A wage rate, for instance, does not have the same significance as, say, the price of vacuum cleaners.) It will be useful, therefore, to carry on the analysis in terms of three classes of prices, defined as follows: (1) Those which enter into costs that do not depend upon costs. These will be referred to as basic costs. Of them the most

notable are wage rates. (2) The prices of finished consumers goods.¹ Analytically, these may be defined as those that depend upon costs but do not enter into costs. They are the analytic counterpart of basic costs and will be referred to as final prices. (3) Those prices which both depend upon costs and enter into costs. These will be referred to as intermediate prices and the products of which they are the price as intermediate products.

The results of an autonomous change in any price depend also upon the way in which other prices are affected. If it is assumed that there are no induced changes in other prices, then the principal consequences of the autonomous price change may be missed. The attempt to describe the effects of price changes thus leads inevitably to the subject of price relationships, and it is in this connection that the above classification acquires significance. Any two prices may be related to one another in three different ways: (1) The commodity X may be a substitute for or complementary with the commodity Y in demand; i.e., a change in the price of X may bring about a change in the demand for Y in the opposite or in the same direction. The commodities in question may be consumers goods or factors of production and the relationship between them may be derived from the characteristics of consumers' indifference maps or of the production functions of firms respectively. (2) The commodity X may be a technical substitute for or technically complementary with the commodity Y in supply; i.e., a change in the output of X may bring about a change in the supply of Y in the opposite or in the same direction. (3) The commodity X may be related to the commodity Y in the way in which input is related to output so that a change in the price of X can cause a change in the cost of producing Y and a change in the output of Y can bring about a change in the demand for X. Following Hicks, this situation may be described as one in which there exists a transformation relationship between X and Y.

Even where X and Y do not appear to be related directly to one another in any one of these three ways, a change in the price of X may well affect the demand for or the supply of Y via the prices or amounts of other commodities. Indeed, it is fundamental that all prices depend in one way or another upon all other prices.

In view of the number and complexity of these relationships it would appear impossible to follow out the effects of an autonomous price change without detailed analysis of the relationship of the price that is changed to all others in the system. But closer examination of the effects of price changes will suggest a way in which this can be done in a manner adequate to our purpose without unduly complicating the analysis.

The net effect of any price change can be broken down into three com-

¹ The prices of finished capital goods are in a somewhat different situation. These do enter into costs in that they may affect the fixed costs of enterprises in various ways, even though they do not enter into marginal costs or variable costs in the same way in which the prices of services, raw materials, supplies, etc., do.

ponents: a substitution effect, an income effect, and a production effect. Any induced substitution of one type of input for another or of one type of output for another by either an individual or a firm constitutes a substitution effect. Any change in the real income of an individual is an income effect. Any induced change in the rate of production by a firm is a production effect. The three, however, do not have the same significance.

Let us first consider pure substitution effects. It goes without saying that the substitution of one good for another in consumers' budgets or of one type of output for another is certain to have substantial effects upon the relative earnings of the firms or industries affected and upon the output, volume of employment, and investment program of each. In large measure, however, these cancel out, so that the net effect on profits, output, and employment in the system as a whole is not likely to be large, save in exceptional cases. Therefore, since we are interested in aggregate investment, the pure substitution of commodities (whether as outputs or as inputs) will be disregarded.

This conclusion applies with much less force to the substitution of factors that may be caused by a change in prices. Nevertheless, it, too, will be disregarded. The main reason for so doing is that we shall deal mainly with the effects of general price changes, i.e., changes which involve whole classes of prices, and there is considerable doubt as to whether such price changes would cause substitution of factors. Another reason is that the substitution of factors is frequently not a short-run operation and we shall be concerned mainly with the short-run direct effects of price changes. In brief, we shall ignore all actual substitution effects (though not the induced price changes that are caused by the threat of substitution) and concentrate on income and production effects which do not in any way cancel out in the whole system.

Let us now turn back to the question of price relationships and see whether the disregard of substitution effects makes it any easier to take account of induced price changes. If X is a close substitute (of any kind) for Y , a reduction in the price of X will cause substitution against Y in favor of X and may induce a reduction in the price of Y . There is certain to be substitution against other remoter substitutes in favor of X and, if the price of Y is reduced, in favor of Y . If X and Y are complementary, a reduction in the price of X will cause substitution against other commodities in favor of Y and may induce an increase in the price of Y . All such actual substitution we shall disregard for the reasons indicated above.

What cannot be ignored, however, is that any change in the price of Y induced by actual substitution or the threat of substitution will itself have income and production effects of the same sort as will the autonomous change in the price of X . Therefore, we shall assume that there are induced changes in the prices of substitute goods which amplify the income and

production effects of the autonomous change in the price of X and induced changes in the prices of complementary goods which make them smaller. In so far as substitution effects take the form of actual substitution, we shall disregard them, but in so far as the threat of them induces price changes which in turn have income and production effects, they cannot be assumed away.

Although the consequences of the relationships between substitutes and between complementary goods are considerably simplified by leaving substitution effects out of account, the consequences of transformation relationships are not. And these must be fully treated, for it is clearly out of the question to assume that a change in costs will leave prices entirely unaffected (unless we are treating the limiting case of complete price rigidity). In this connection the above classification of prices is useful. We shall take account of transformation relationships by assuming that changes in basic costs affect intermediate prices and that changes in the latter affect final prices. The exact extent of the effect may, of course, vary under different conditions. We shall, therefore, make various assumptions concerning the flexibility or responsiveness of prices.

In one respect, however, the treatment of transformation relationships will be artificial. They are, for purposes of pure theory, at least, symmetrical. Properly speaking we should, therefore, not only take account of the way in which changes in costs affect prices but also of the way in which changes in the demand for output may affect the prices of input. This is of special importance in the case of basic factors of production because the induced price change may have very substantial income effects. But for purposes of simplicity induced price changes of this type will be disregarded.

Before leaving the subject of price relationships, it is necessary to list other assumptions that will be made in the analysis of price changes and one proposition that follows from them. We shall assume that the variable costs of firms consist exclusively of basic costs and payments to one another for intermediate products and that, in so far as transformation relationships exist, they involve only those of input prices that enter into variable costs. One consequence of this assumption is that, for the whole group of business units, basic costs are the only variable costs.

A more important proposition, however, that follows from the above assumptions is that if all basic costs are altered simultaneously and proportionately in the same direction and if prices move proportionately with marginal costs, then, in due time, all prices will change in the same proportion. The reason is simply that marginal costs are made up entirely of basic costs and payments for intermediate products. A 5 per cent increase in basic costs does not in itself increase the marginal cost of any product by as much as 5 per cent. Yet the increase in intermediate prices directly induced by the change in basic costs will constitute further increases in variable costs. Thus,

the full effect of a 5 per cent increase in basic costs will be a 5 per cent increase in all prices and variable costs. The only modification to be noted in this proposition is that if there are production effects, i.e., if the changes in basic costs and prices cause changes in output, marginal costs might change by a greater or smaller percentage than the prices of inputs.

Examination of the whole question of price policy would require the analysis of many types of price changes, even though the problem is simplified by the various assumptions discussed in the preceding paragraph. The forthcoming analysis will, however, deal with only three: first, price changes which are initiated by autonomous changes in basic costs; second, those initiated by autonomous changes in intermediate prices and consumers goods which take the form of a change in margins between prices and costs involving no change in basic costs; and, third, price changes initiated by autonomous changes in intermediate prices but which leave final prices unaffected.

Most of the price readjustments actually proposed from time to time would be combinations of two or more of the above types. And it cannot be concluded hastily that such a change would have an effect equal to the sum of the effects of the component changes. Nevertheless, we shall cover a number of practical proposals if we examine the probable results of these three types. Furthermore, it is not difficult, once the analysis has been carried that far, to apply it to combinations of two or more types.

3. *Price and Cost Changes and Investment*

Changes in prices and costs, whatever their nature and extent, affect the rate of investment mainly by raising or lowering businessmen's expectations of the rate of return to be earned on funds invested in real assets or by making their expectations more or less certain than they were before.² A change in costs and prices may affect the investment decisions of a particular firm either by causing it to revise its expectations as to conditions of demand for its output or conditions of supply of input in the future or by changing the cost of carrying out a specific investment at the present time, or both. If a firm is induced to plan a higher rate of output for the future, or to substitute an input of fixed factors in the future, it will probably be induced to undertake investment. Thus, in more familiar terms, investment decisions depend upon the relationship between expected demand and expected operating costs, the relative costs of different types of input, and the probable rate and direction of change of costs and prices.³

² They may also have an effect via the interest rate, but we are here interested only in their significance for the marginal rate of return on real assets.

³ To be specific, a change in prices and costs which is expected to result in increased demand will induce businessmen to plan outputs or higher prices or both and will thus strengthen the inducement to invest. A change which leads to the expectation that the cost of current input will be less in the future will lead them to plan lower prices and

These propositions require repetition only because they focus attention upon the proposition that, since changes in prices and costs, income, and the state of technical investment opportunity are all of a rather complex variety and since they all affect a substantial number of firms, it is impossible to compare their importance for investment decisions without tracing the various ways in which they act upon businessmen's expectations. For reasons that are all too familiar to any economist who has reflected on the problem, this is a rather discouraging conclusion. It is notorious that expectations are, on occasion, whimsical, irrational, and unpredictable with the result that investment decisions themselves are bound to be somewhat unpredictable. But the analysis can be advanced at least a few steps by listing the several sets of considerations upon which the net effects of price changes depend.

First, the influence upon investment decisions of changes in economic conditions external to a firm depend upon certain direct effects they may have upon it. A change may be said to have a direct effect upon a firm if it compels a revision in the firm's production plan; that is, if it forces the firm to plan changes in the prices to be charged for output, prices to be paid for input, the volume of any type of output, or the volume of any type of input. If, for instance, competitors raise their prices, the firm must either raise its own prices or plan a larger output stream. If wage rates go up, it must plan for larger cost outlays; it may plan higher prices and smaller outputs in consequence; or it may leave its sales and production plans unchanged and merely accept an expectation of lower profits. Thus, such changes in the firm's economic environment do compel revisions in its production plans, and these constitute the direct effects.

Second, the consequence for investment decisions of an external change depends upon the way businessmen are likely to interpret its direct effects. Suppose there has been a general increase in wage rates in a particular community and that, immediately thereafter, firms producing and selling in the community find that both their costs and the demand for their products have increased. There may be no possible doubt what the actual experience of the various firms in the community has been but it may give rise to strange and diverse changes in expectations because there is no reason to believe that businessmen can perceive clearly the relationship between the changes in cost and the change in demand. If they regard the increase in costs as the direct result of the rise in wage rates and the increase in demand as purely fortuitous, the effect upon their investment

larger output or to expect larger profits and will thus be favorable to investment. Price changes which change all businessmen's expectations concerning the relative prices of various types of input in the future or which change the relationship between the present cost of capital equipment and the expected costs of current income in the future may induce them to change the method of production and thus to engage in investment.

policy may be sharply adverse, whereas it might be negligible or even favorable if a change in demand was understood to have been the result of the change in wage rates. It is open to question that there is any uniformity in the way in which businessmen do interpret their experience. But it cannot be denied that some estimate of the interpretations they may be expected to put upon their experience is essential if we are to have any understanding of what determines the rate of investment.

Third, and finally, any change in economic conditions external to the firms may have what we shall call indirect effects, even if it has no indirect and immediate impact whatever. The outbreak of war in Europe, a political election, a change in trade union organization, or the adoption of a different policy by a competing firm may, without immediately affecting the conditions of demand for the firm's product or the conditions of supply of input, give rise to the expectation that a change in production plans will become profitable at some time in the future.⁴

When it comes to analyzing concretely the net effect of a particular price change a certain difficulty is encountered. It is quite possible that the price readjustment will induce certain changes in investment decisions before its direct effects have been widely felt. If so, what actually happens to business firms after the readjustment comes partly under the heading of direct effects, i.e., those revisions of production plans actually necessitated by it, but represents in part the effects of the change in investment itself. In order to investigate the direct effects, therefore, we shall have to argue that, in the absence of indirect effects, a price change would not induce a firm to alter its investment plans unless and until actual changes in current supply and demand conditions caused it to revise its expectations. The direct effects, as defined, include only the actual observed changes in demand and supply conditions attributable to the external impulse (together with the changes in production plans thereby necessitated) *which would come about in advance of* (i.e., in the absence of) *any change in investment*.

In investigating the net effect upon investment decisions of any type of price change we shall inquire (a) what its direct effects would be—in advance of any change in investment—and (b) how these direct effects would be likely to be interpreted. From their very nature, it is hardly possible to analyze the probable nature of indirect effects, although it should

⁴ In a sense it is not legitimate to argue that the direct effects of an external change, the interpretation to be put upon it, and the indirect effects are the three things that must be known if we are to assess the probable influence upon investment decisions of the external change. The second of the three factors is really determined by the first two. Once we know how an event compels revisions in production plans and how it effects the general psychology of businessmen, it should be possible to deduce the interpretation. The interpretation of the direct effects must be included as a part of the indirect effect itself. The three factors are listed separately here simply because it clarifies the discussion of particular types of price changes to study their direct effects and the problem of interpretation of those effects separately.

not be lost sight of that they might condition very sharply the final decisions of businessmen.

It goes without saying that the direct effects of any external change depend upon a variety of factors. Exhaustive discussion of direct effects would require elaborate consideration of different hypotheses as to price behavior, the saving habits of various groups in the community, dividend practices, *ad infinitum*. It will save much trouble, therefore, if we list at this point the principal assumptions that will be employed in the forthcoming analysis:

1. For the reasons just given we shall assume that the rate of investment in real terms is constant.
2. It will not be assumed that dividend and interest payments and other income creating fixed costs fluctuate with output or with earnings. We should usually assume that fixed cost payments and profit withdrawals are not immediately affected by changes in prices and earnings.
3. The second assumption involves an implicit hypothesis as to the behavior of business saving. As to individuals, it will be assumed that the absolute amount of their saving increases with their incomes.

4. Cost-Price Changes Due to Changes in Basic Costs

The first type of price change listed above is that in which there is a change in basic costs and a consequent readjustment in the price structure. As an example, let us assume that there is a general reduction in wage rates and that prices are sufficiently flexible to move with (marginal or average variable) costs.⁵ Two types of price flexibility require consideration. We shall first discuss the case in which prices move *proportionately* with marginal costs and then turn to that in which they move by the same *amounts* as average variable costs. It will be assumed to begin with that dividend payments, profit withdrawals, and fixed cost payments remain constant and then we shall consider what happens when this assumption is relaxed.

The essential character of such a wage and price adjustment can be summed up comparatively briefly. The general wage reduction (assuming that prices move proportionately with marginal and therefore with basic costs) constitutes at the moment when it occurs (1) a reduction in real income paid out to wage earners, and (2) an increase in real income paid out to all non-wage earners. Under the assumptions here employed, prices will be reduced by the same percentages as payments to all basic cost factors combined. This means that unless and until there is a change in fixed cost payments (including interest and dividends) or a change in

⁵ If prices remain constant and basic costs are reduced, the effect is in certain respects the same as that of an increase in final prices with basic costs constant. This latter type of change will be considered below.

output which would alter (a) the money income paid out to basic cost factors other than wage earners as well as (b) the number of wage earners employed (and consequently the aggregate wage bill) the real income paid out in the form of basic costs will not change. However, receivers of interest and dividends and other payments which constitute fixed costs will experience an increase in real income, so the net effect of the wage reduction will be to increase real income paid out. Unless the whole increment to real income is saved, this income-effect is bound to lead to an increase in output.

If prices do not move proportionately with marginal costs but by the same *amounts* in all enterprises, the result will be rather different. The price and wage reduction will still constitute a reduction in real income paid out to wage earners and an increase in real income paid out to others. But if prices decline by the same amounts as average variable costs, the reduction in real income paid out to wage earners will be exactly balanced by the increase in real income paid out to others, so that aggregate real income paid out will remain unchanged.

This may easily be explained as follows. If there were no change in output, the wage and price cut would cause a reduction in money income paid out and an exactly equal decline in total receipts. It follows that, if the wage and price cut actually brings about a reduction in spending exactly equal to the cut in money income paid out to wage earners, there will be increase in output or in aggregate real income. It will accomplish this result, so far as consumption is concerned, by its effect on wage earners' incomes, if there is no change in the ratio of consumption to saving and investment for the community as a whole. Real investment is constant by hypothesis; so the necessary decline in the dollar volume of investment must occur as a result of the cut in prices. Thus, if the second type of price flexibility prevails, the wage reduction will constitute at the moment when it occurs a change in the distribution of real income paid out but no change in the aggregate amount. Any change in production which follows this type of price readjustment will result from a change in the propensity to save of individuals.

It would appear from this exposition that a price change which has, on balance, favorable income effects would be bound to stimulate investment. But there is another side to the picture, for the amount of real income paid out to individuals cannot be increased except at someone's expense. Let us suppose (returning to the first hypothesis concerning price flexibility) that business firms as a whole reduce basic cost payments 10 per cent and prices 10 per cent (but continue to pay the same dollar incomes to receivers of dividends and interest), and that both investment and the consumption of basic cost factors (in dollars) are reduced proportionately at the same time. The only element in receipts that will not have been reduced is the consump-

tion of the receivers of interest, dividends, and fixed costs. But unless they consume the whole of their incomes, this unchanged element in receipts must be smaller than the unchanged element in disbursements. Therefore, the immediate effect of the price and wage cut must be to reduce receipts more than disbursements.

But this is merely the beginning of the trouble. If the individuals whose money incomes have remained the same and whose real incomes have thereby been increased to continue to spend almost as much money as before and thus increase their real consumption (i.e., if they do not save the whole increments to their real incomes), there will have to be an increase in production with its attendant increases in variable costs. If, of course, the beneficiaries of the increase in real income paid out do save the whole increments to their incomes, then all business receipts will be cut by 10 per cent but disbursements of one type will not have been reduced at all. The conclusion is, therefore, inescapable that the increase in output which would result in this case would be achieved through the disbursement by business firms of larger real incomes in the form of interest and dividends and that it could not be achieved unless firms were able and willing to see their cash receipts reduced more than their cash disbursements.

One point remains to be considered. If there is an increase in production (i.e., unless the whole increment to real income paid out is saved), it will necessitate an increase in variable cost disbursements which will, in turn, cause an increase in consumption, another increase in output and variable costs, etc. In brief, there will be not merely the initial income effects of the price change but in addition a whole series of induced increases in money incomes. Together these may give rise to a considerable expansion of output. This is important for two reasons. First, since the change in production itself is highly significant for investment decisions, it is necessary to take account of the fact that it may be of considerable magnitude when we are assessing the total effects of price changes. Second, the expansion in output initiated by the original income-effect will, in itself, increase business earnings and offset in part the initial reduction in business saving. The expansion cannot, however, entirely offset the original cut in business saving because, as it progresses, individuals will save some part of the increments to their incomes and each induced increment in receipts will, therefore, be smaller than the increment in disbursements which gave rise to it. These subsequent production effects do not, therefore, modify the conclusions reached above that the increase in output would be achieved through an increase in real income paid out at the expense of business saving.

This at once raises a question as to the possible permanence of an increase in output achieved in such a fashion. Unless business firms can continue

for a fair period of time to reduce their gross saving or to dissave, they would surely be compelled to reduce dividend payments, default on interest payments, cut salaries, and in other ways reduce disbursements. But if they did so, they would set in motion a contraction of output which would continue until the original level had been reached. When the change had fully run its course, all incomes would have been reduced and in the same proportion as basic costs. Output and real income would be the same as before. The only change that would have taken place might have been some redistribution of real income among groups. In particular, there would have been a redistribution at the expense of wage earners and in favor of other basic cost factors.

For purposes of completeness it should be noted that, if there is a reduction in basic costs, and if prices decline by less than the same amounts as average variable costs, there is bound to be a net decrease in real income paid out, an increase in business saving, and a contraction in output of the usual sort. In general any price readjustment that has the effect of widening the absolute margins between average variable costs and prices is bound to increase profit but reduce production. If, to take the extreme case, final prices were entirely rigid and basic costs were reduced, all groups would receive reduced real incomes (unless and until profit and dividend payments expanded) and the contraction and production would be all the greater. The final results in all such cases depend, of course, upon profit payments and withdrawals.

One direct effect of this type of price change that has not yet been mentioned would necessarily be a decline in the prices of capital goods so that, if the absolute return anticipated on any prospective investment remained the same, the *rate* of return would automatically be increased. This decline in the cost of investment, in itself, would certainly be a factor favorable to investment but its significance is easy to exaggerate. If prices moved proportionately with marginal costs, actual earnings on existing capital assets would be reduced at least as much as prices and probably more. Even rates of return on prospective new investments would not be increased, except, perhaps, by the increase in output, because all prices and variable costs would be reduced proportionately with the prices of capital goods.

5. Cost-Price Changes with Basic Costs Constant

The second type of price change listed above is that in which basic costs are assumed to remain constant and prices of finished consumers goods are altered in such a way as to narrow or widen profit margins for all producing units. In view of the wide attention that has been paid to the subject of price rigidity in recent years we shall discuss a price change such that all

profit margins are narrowed and the prices of finished consumers goods reduced while basic costs remain unchanged.*

It is obviously true of this type of price change, as it is of a wage reduction, that an exhaustive analysis of all the possibilities would be both complex and extensive but its essential character can be conveyed with comparative ease. (It will be assumed, as in the previous case discussed and for the same reasons, that the real rate of investment initially remains the same.) This type of price change constitutes at the moment when it occurs an increase in real income paid out by business enterprises to all groups in the community unless and until (1) dividends, interest payments, and other fixed charges are reduced or (2) there is a change in output. If there is no increase in individual saving, receipts (in dollars) will remain the same as before but there will be a production effect and an attendant increase in variable cost disbursements. If the whole increment to real income paid out is saved, then receipts (in dollars) will decline proportionately with prices, there will be no change in the rate of production, and the entire decline in receipts will represent a reduction in business earnings. Any result intermediate between these extremes is possible. Whatever happens to consumption, business profits are certain to be sharply reduced.

In so far as there is a change in production, it is bound to give rise to others which could be traced out in the same fashion as in the previous section. The induced production changes may make the expansion in output very substantial and are likely to offset, in part, the original reduction in business earnings. They cannot do so wholly, for reasons discussed above.

As in the case of a change in basic costs, this suggests that an increase in output achieved through a general reduction of profit margins would not be long lived. It is reasonable to suppose that if the price reduction here under discussion were substantial, it would cause a sharp reduction in earnings, and business firms would give up the payment of dividends and default on fixed charges, and other entrepreneurial withdrawals would be similarly affected. If this process of reducing dividends and fixed charges were carried to its logical conclusion, the money incomes of the receivers of interest and dividend payments would have to be reduced until income paid out had been reduced by the same proportion by which prices of finished consumers goods had been cut. The net effect of the price change would be to redis-

* It would be difficult to define a price change that would actually reduce the profit margins of producers in the same proportion. If it is merely assumed that all intermediate prices as well as those of consumers goods are reduced by a certain stated percentage, the profit margins of firms which have a high proportion of basic costs to other costs would be more sharply reduced than those of firms so constituted that a large proportion of their cost constitutes payments for intermediate products. Clearly, if the burden of the price reduction were to be distributed evenly it would be necessary for the prices of some consumers goods to be reduced more than those of others. This point need not, however, be pursued further. We shall simply assume that in some fashion the burden of price reductions is evenly distributed.

tribute real income in favor of wage earners and other basic cost factors and at the expense of interest and dividend receivers but to produce no change in output, except by changing the propensity to save.⁷

To complete the analysis of price changes mention must be made of the third type. This is the sort of readjustment that involves a change in a number of intermediate prices and, perhaps, in a number of consumers goods prices as well but it leaves both basic costs and the general level of consumers goods prices unchanged. Most of the comments that it has been possible to make about the direct effects of other types of price changes do not apply to this one.⁸ If neither basic costs nor the level of consumers goods prices is affected, then there is no change in the real income paid out to any group in the economic system (unless payments of profits or fixed charges are affected in some way). The results of this type of change, therefore, cannot be described in terms of the change in the level of output or in the volume of profits earned by business enterprises as a group.

What such a change does accomplish, however, is to increase the incomes of certain enterprises at the expense of those of others, and this may be of great importance. For instance, a suitable readjustment might reduce the prices of capital goods and of the materials that enter into them. This would, to be sure, make the producers of capital goods worse off than they were before and, if the real volume of investment remained, for the time being, the same, it would mean a net reduction in the receipts and earning of all business enterprises together without an increase in the real income of any group in the community.

Nevertheless, it would automatically improve the expected rate of return

⁷ Of course, it should not be lost sight of that some permanent increase in output might be achieved in just this way. In the first place, business firms probably would not wish to reduce fixed charges to the extent necessary to offset completely the decline in their receipts or the increase in their variable costs. And, even if they wished, they almost certainly would not be able to do so. It is probable, therefore, that such a price reduction would reduce the amounts of saving performed by business firms either permanently or for a considerable period of time. In the second place, it is generally taken for granted that the marginal propensity to save of receivers of dividends and interest is stronger than that of wage earners, small entrepreneurs, farmers, and other groups properly to be regarded as the recipients of basic cost payments. Thus, this change in the distribution of income might permanently reduce the propensity to save among individuals in the community as well as among business firms.

⁸ It is hardly necessary to repeat that the direct effects of price and cost changes of this sort cannot be said to be unambiguously favorable or unfavorable to investment decisions. Although they would be likely to lead to some reduction in output, they would reduce the disbursements of firms more than their receipts, even taking into account induced production effects. The effect upon rates of return of the change in the prices of capital goods would in this case be unambiguously favorable. The cost of investment would decline with prices and the average income earned by existing assets would rise so that both changes would work toward a rise in the rate of return. In view of the reduction in output, however, it is by no means certain that the rate of return on prospective new investment would be increased. If profit payments were increased sufficiently to prevent the contraction in output, the direct effects would be all the more favorable, for business profits would be increased but not business saving. That is to say, disbursements would be reduced no more than receipts but profit disbursements would be a larger proportion of the total.

on any investment under consideration, with the exception of prospective investments in the firms whose profits had been adversely affected. It would have few direct effects that would be definitely unfavorable to investment but would have this one that would be unambiguously favorable. The damage done, if any, to the incentive to invest in the capital goods industries themselves would not be of vast importance unless the rate of investment in real terms were already fairly high. At a time when investment needs to be stimulated there is almost certain to be large excess capacity in the capital goods and construction industries and little possibility of starting a revival by investment in the capital goods industries themselves. This would appear, then, to be a most hopeful type of cost-price readjustment.

The very nature of this whole discussion on direct effects must, however, have made it clear that some of the most important elements of the problem cannot be taken into account until we are prepared to consider the interpretations that businessmen may place upon the various direct effects of cost and price changes as well as even less calculable indirect effects upon their expectations. To these matters we now turn.

6. The Interpretation of Direct Effects

In dealing with the interpretation of direct effects and the changes in expectations to which they may give rise, the economist is, unfortunately, compelled to indulge to a considerable degree in speculation. A few beginnings have been made in the analysis of actual business motivation in the determination of both price and investment policy. But the progress in achieving a real understanding of investment decisions has been small. The very character of these decisions makes the connection between them and current economic conditions or recent economic changes rather tenuous because they are bound to be forward looking in such a great degree. Nevertheless, two general propositions will be advanced here concerning the reactions of firms to direct effects. The first has to do with the interpretations put upon them; the second with the changes in expectations to which they give rise.

There is a problem of interpretation because it is not always easy for businessmen to perceive that all the various direct effects of an external change which they experience are, in fact, traceable to a single common cause. Indeed, there is good reason to believe that certain sorts of direct effects are recognized as such while others are not and that the former have, naturally, much more importance for business decisions than the latter. The underlying reason for believing that all such cause and effect relationships are generally not perceived is that no general readjustment of prices and costs comes about instantaneously. Whenever there is, in the real world, a general reduction in basic costs or a general increase in the prices

of consumers goods or any other general change in prices, it comes about piecemeal as the sum of a large number of individual specific price changes on the part of different firms within industries.

This is of crucial importance because certain of the direct effects of each such specific price change are concentrated upon a single firm or small group of firms while others are diffused over a large number of enterprises. For instance, a wage reduction in one industry will have a powerful impact on the firms in it but a diffused impact on others. Those of its direct effects which take the form of a change in the conditions of supply of input are concentrated on the former. On the other hand, those of its direct effects which follow from the fact that the reduction in wage rates constitute a reduction in the real incomes paid out to the individuals in question are felt largely or entirely by firms which are not in the industry in question. Consequently, the effect upon costs is much more likely to be regarded as a necessary consequence of a wage change than its effects upon the incomes of and consumption by wage earners.

It is a little more difficult to decide just which effects of a change in intermediate or final prices will be recognized as such. Let us suppose that there is an autonomous price reduction of the second type; i.e., one that is not the result of a cut in basic costs. It will be recollected that this constitutes, at the moment when it occurs, an increase in real income paid out so that it must increase production but reduce profits. Even if the price cut is limited to a single firm it will have these same direct effects, but their distribution among firms will be most uneven. The immediate increase in output will be concentrated on the firm that has cut prices because there will be substitution in its favor. Close competitors will find output reduced, by the same substitution, although the net change in output by the whole group is bound to be in the direction of an increase. The income effect of the price cut and effects of induced increases in money income paid out are likely to be felt in the form of an increase in demand by firms which are not close competitors of the one with which the price cut originated.⁹ The entire reduction in profits will be concentrated on the firm that has made the price cut and its close competitors. Multiply a specific price cut of this sort many times and it becomes a general price change. And even if the whole movement occurs within a fairly short space of time it is obvious that certain of its direct effects are going to be regarded by the firms which experience them as purely fortuitous and having little or no connection with it.

Specifically, in the case of a price reduction by one firm, the substitution

⁹ The substitution effects of the price reduction by themselves will tend to diminish the demand for all products which are not complementary with the one that has been made cheaper. On the other hand, the income effects will in general be in the opposite direction. Thus, the net effect will be to increase the demand not only for complementary goods but also for those which feel the income effects more than the substitution effects.

effects on the demand for competing products and consequently the effects on the output and profits of competitors are certain to be associated with the price reduction, as is the increase in sales by the firm which reduces prices. On the other hand, the favorable income effects on the demand for products which feel the substitution effects very mildly and the favorable induced production effects are almost certain not to be associated with the price cut. If the price in question is that of an intermediate good, the direct effect of its reduction on the costs of other firms is almost sure to be associated with it. But the causal connection between the particular price cut and subsequent changes in the prices of intermediate or final products of which the costs have been reduced may not be attributed to it.

Applying these results to the case of a general price reduction of the second type, it would seem that not all of its direct effects would be associated with it. If the favorable income effects of the various specific price changes which make up the general price movement together with the induced changes in money incomes were not clearly recognized as effects, it would be natural for businessmen to attribute only a part of the increase in output to the general price change. On the other hand, the decline in profit would almost certainly be associated in its entirety with the price readjustments because the only ways in which the profits of a particular firm could be affected adversely would be as a result of a cut in its own price or in that of a competitor (or, in the price of the competitor of a firm to which the firm in question sells a part of its output). In general, then, the whole of the direct effect on profits would be regarded as a consequence of the price readjustment but a part of the direct effect on output would be regarded as purely fortuitous.

It is easier to distinguish between the concentrated and diffused effects of a change in basic costs than between those of a change in intermediate or final prices because changes in wages or in the prices of raw materials are external to the large majority of business firms. All that we have to assess is the interpretation placed by business firms on these external changes. On the other hand, price changes are made by businessmen themselves and are external only to other business enterprises than those which make them. In the case of a general change in prices over a large part of the system, most enterprises actually participate in the change and there are few which merely feel the effects of actions taken by others. Nevertheless, the experience of any individual firm following a general price change will depend in large part upon the actions that other firms have taken. It is quite possible, therefore, for firms to misinterpret that experience and fail to associate all of the effects of the general change with it in the manner indicated above.

The examples just discussed are sufficient, without examination of other types of price changes, to support and illustrate the general proposition which it has been the purpose of the foregoing discussion to establish.

It is simply that those direct effects of any external change which are felt directly by a single firm or by a few firms will be associated with the change and will be regarded as necessary consequences of it whereas those direct effects that are diffused over a large number of firms will not be directly associated with the change and are less likely to be regarded as necessary consequences of it.

The significance of this proposition in a discussion of investment decisions is apparent. If certain consequences of a price readjustment are regarded as necessary consequences and can, in time, be expected whenever such a price readjustment is about to be made and if other consequences are associated far less as closely with it and are not looked for when such a price readjustment is in prospect, then it is natural to expect that direct effects of the first sort will be weighted much more heavily by businessmen when they are assessing the results of the price readjustment than direct effects of the second variety. What this heavier weighting means for investment decisions, in more specific terms, is that if the price change is expected to be repeated in the future or to be discontinued, the direct effects which have been recognized as its necessary consequences will be expected also to be repeated, whereas businessmen will have no such certainty that the more widely diffused direct effects which are less clearly recognized as consequences of the readjustment will be felt again. If, for instance, the effects of wage changes on costs are recognized as consequences of the wage changes and their effects on consumers' incomes are less clearly recognized or discounted and if one wave of, say, wage increases creates the expectation of others to follow, then businessmen will expect their costs to mount and will feel considerable certainty about this expectation but will either have no clearly defined views about the probable changes in consumers' incomes or else views that they hold with no unanimity and certainty.

7. Direct Effects and Expectations

The second proposition concerning businessmen's reactions to the direct effects of external changes has to do with the effect of such changes upon their expectations. The expectations of a business firm can be affected in three different ways by the direct effects of any external change. The firm can take the new conditions of demand or supply which result from the change as given and regard them as stable. It can expect the changes which it has just experienced to be repeated, that is, it can extrapolate the observed trend, or, lastly, it can expect the changes to be reversed. It goes without saying that the interpretation of and reaction to direct effects depends very largely upon which of these three expectations they set up. Most of the comments in the foregoing discussion on the immediate impact of direct effects upon investment decisions has been highly inconclusive for just this reason.

Any generalization on the nature of the expectations set up by given

external change is, of course, exceedingly hazardous and, inasmuch as the expectations set up in the minds of different individuals are certainly not the same, such a generalization can only pretend to describe the dominant pattern. Under the protection of this admission of uncertainty, the second proposition on the reactions of firms to the direct effects of price changes may be stated in the following form. A given external change which is regarded as a deviation from the norm sets up the expectation that it will be repeated or, at least, that the newly established conditions will continue in the short run. It also sets up the expectation that it will be reversed and that there will be a return to a norm in the long run. The former expectation becomes weaker and the latter becomes stronger as the change causes the values of the variables affected to appear to diverge more widely from the norm.

Mr. Keynes has analyzed the behavior of expectations with regard to interest rates in very much these same terms. It is doubtful, however, whether anything that might be called a proof can be advanced for the proposition (at least without a most uneconomic excursion into the realm of psychology), but some simplification of it may make it appear more plausible. In the last analysis it expresses the belief that the only way in which businessmen can form expectations of the future is on the basis of the past and the present. At any moment of time there are certain variables which have had fairly stable values, others which have changed at a fairly stable rate, others which have fluctuated in some sort of cyclical pattern, and still others which have been persistently erratic. It might be said of the last that the only respect in which their behavior has been consistent is that it has failed to exhibit any pattern. This sort of consistency should itself induce businessmen to form no expectations about them in the future. It is hard to see, therefore, how an external change could change business expectations regarding their behavior.

The past behavior of variables which are believed not to be wholly erratic or completely unpredictable automatically determines some sort of norm with which present behavior can be compared. If a rate of change of a variable has been established which has convinced businessmen of the existence of a long-term trend, then an abnormally rapid change or a change in the wrong direction will constitute a deviation. Likewise, if the normal behavior of a variable includes a cyclical fluctuation, then even a deviation from the long-term trend will not set up an expectation of a reversal of the movement until it has proceeded some distance. It is only when the behavior of a variable involves a greater and greater deviation from the normal pattern that the expectation of a continued deviation will become weaker and that of a reversal stronger. The norm itself is, of course, constantly in process of change because the current behavior of any variable during one time period becomes part of its past behavior for the next. Unless,

effects upon investment decisions has been highly inconclusive for just this reason.

Any generalization on the nature of the expectations set up by given

however, memory is incredibly brief, the norm (i.e., normal pattern) must have much greater stability than the actual value (i.e., actual pattern of behavior) of the variable and it must be possible to have at least a vague conviction that its current value is either normal or abnormal.

It may be objected that a norm defined by past behavior is nothing but an average of previous values and that the theory of probability cannot be used to predict future values on the basis of past behavior when we are dealing with the type of phenomena here under consideration. This is perfectly true. But if expectations are not arrived at in some way by extrapolation, it is hard to see how they can be formed, and, consciously or unconsciously, they have to be, because economic decisions are inevitably forward-looking. Unless, therefore, we give up all attempt to understand how past and present events are interpreted and how a picture of the future is based upon them, there would seem to be support for the above proposition, if used with discretion.¹⁰

If these considerations are admitted to be persuasive, they raise, or appear to raise, another difficulty. If there is such good reason for believing that businessmen expect the values of variables to be close to the norm, what reason is there for asserting that a given change is expected to be repeated (i.e., to continue) until it has gone some distance? Again, nothing very definite can be offered by way of proof. But it is possible to point out that the expectation that the value of a variable will deviate from the norm is, itself, a part of the expectation that it will behave "normally." Past experience seems likely not only to define a normal pattern of behavior which it is reasonable to expect (with variations) in the future but also to suggest that random (or cyclical) variations from the norm constitute a part of that pattern. Thus, the same evidence that sets up the expectation that the behavior of a variable will not deviate indefinitely from the normal pattern makes it most unreasonable to expect a random or cyclical deviation to be immediately corrected before it has achieved any magnitude.

It would be possible to continue almost indefinitely this discussion of expectations and of the process of interpreting a change in economic conditions and of planning future action upon the basis of it. But enough has been said both to amplify the content of the two propositions advanced in this section and in the preceding one and to suggest the type of evidence that could be adduced in their support. It is high time, therefore, to return to the question of specific price changes, the interpretation of their direct effects, and their consequent influence upon investment decisions.

¹⁰ It should be pointed out in passing that to give up any attempt to understand the formation of expectations would logically compel us to give up trying to analyze economic phenomenon in any way, for it is impossible to trace the causal connection between, say, a change in costs and a change in prices by a single firm without tacitly assuming something about expectations.

8. The Full Effects of Price Changes

Three general types of price changes were defined in a previous section and it is now necessary to show the bearing of the two propositions concerning interpretation and expectations on their direct effects. The first is that which occurs when there is a general reduction or increase in prices as the result of a change in basic costs. Its direct effects were described above in detail. In the discussion of interpretation it was pointed out that a general wage and price reduction would actually take place as the sum of a series of specific wage and price changes. Each time one of these occurred, a few firms would find their costs reduced very substantially but the effect of the reduction in incomes paid out (if any) would be diffused over many other enterprises. It is highly probable, therefore, that the wage reductions would be looked upon as favorable developments, even if prices were not reduced sufficiently to bring about an actual increase in output or even if disbursements to owners were reduced in such a fashion as to prevent an increase in output.

The proposition concerning expectations applied to this type of price change implies that the initiation of a wave of wage reductions will lead businessmen to expect costs to go on declining for a time, and later to rise. They will be more likely to expect the decline in costs than a continued decline in demand for reasons just adduced. Even if this is an optimistic interpretation of the effects of the wage reduction, however, it is not one that will induce an upward revision of investment plans immediately. If costs are believed to be sliding down, it would be unwise to build up or even to hold on to inventories or to undertake construction projects instead of waiting until costs will be lower. In the short run, then, the net effect on expectations that the two propositions would lead us to expect will not be particularly favorable to the prospects for the investment.

But if and when the decline carries costs to what is regarded as an abnormal level, the desired result will be achieved. If expectations behave in anything like the manner described above, current costs and prices will come to appear low relative to future costs and prices. The main significance of the fact (if it be a fact) that prices are expected to move back toward the "norm" when they move far away from it is that cost and price reductions if carried far enough can induce the substitution of present for future inputs. Such substitution may take the form merely of the accumulation of inventories but it may also mean the purchase of durable assets. The receipts to be derived through the use of such assets if purchased would depend on the general level of prices and of demand over a long period in the future. If, therefore, present prices were believed to be low in relation to future prices, there would be a strong reason for investing in them.

The second type of price change is that in which basic costs remain

constant while there is a general narrowing or widening of profit margins and a consequent change in intermediate and final prices. Let us attempt to analyze the consequences of, say, a general reduction in prices brought about by the collapse of a series of price agreements and an intensification of competition with the aid of the two propositions on interpretation and expectations. Applying conclusions reached above, it would seem likely that only a part of the favorable effects of the price reduction on sales would be closely associated with the program in businessmen's minds but that reductions in profits and, wherever they occurred, reductions in the sales of particular products would be attributed directly to it. The reason for expecting this result is that each firm making a specific price cut and all of its close competitors would correctly regard the cut as the cause of a reduction in profits. But a considerable part of the income effects of the price change as well as the induced increases in production and in money incomes would appear to be fortuitous.

Referring to the second proposition, it would seem that such a price change would give rise to the expectation that prices and profits were going to continue to decline in the short run but that the trend would probably be reversed in the long run. Putting the two results together it follows that this type of price reduction would be likely to have profoundly depressing effects on investment in the short run because businessmen would expect prices and costs to fall lower and would underestimate any expansion in output that would continue the process. If, however, the cut were sufficiently drastic or if repeated cuts carried prices to a low enough point so that the expectation of a reversal in trend began to dominate businessmen's values, long-term investment might be encouraged. Even under these circumstances, however, the stimulus to investment would still be limited by the failure of businessmen to perceive the connection between certain of the more favorable effects and the price reductions themselves.

It will be useful to pause at this point and consider certain conclusions that emerge from the foregoing analysis and that are illustrated by the discussion of these two types of price changes:

1. Certain of the favorable effects (income effects and induced production effects) of any price reduction are likely to be regarded as fortuitous rather than as consequences of it.
2. The same is true of certain of the unfavorable (income) effects of a reduction in basic costs.
3. Any general price reduction that carries costs below their expected future level is stimulating to long-term investment.
4. A price cut of the second type constitutes a larger increase in income paid out and must have larger production effects but must reduce profits more than one of the first type which is of the same order of magnitude.

To put it another way, a given production effect can be secured with a smaller reduction of the second type than of the first. (The effect on profits is closely related to the size of the production effect.)

5. It follows from "3" and "4" that a given increase in output brought about as a direct effect of the first type of price reduction will stimulate investment more than a similar increase brought about by one of the second type.

From this proposition and from the consideration mentioned in "2" the conclusion seems to follow that the first type of price reduction is the one more likely to be effective.

The third, and last, type of price readjustment is that which results in a change in intermediate prices which leaves both basic costs and the general level of consumer goods and prices unaltered. As suggested above in the course of a discussion of direct effects, the most promising price readjustment of this third type, and the one most frequently recommended by economists, will be one in which the prices of durable assets were reduced relative to other prices.¹¹

It has already been explained that the direct effects of a price change of this sort give peculiarly little indication of what its full effect would be on investment decisions. The direct effects do not include any change in output. The most important that can be identified is a reduction in the profits earned by the firms which reduce their prices. If, however, the price reduction occurs at a time when the rate of investment is low, then (as pointed out above) the decline in current earnings in these firms would not be an important matter. Thus, the outstanding direct effect would appear to be the reduction in the cost of investment; i.e., the price change itself.

To analyze such a price change with the aid of the propositions on interpretation and expectations is particularly difficult. However, they do yield certain suggestions that are not without interest. The difficulty in predicting the way in which the direct effects of a readjustment of this type will be interpreted arises from the fact that it constitutes a change in the "terms of trade" between the various groups of business firms and is, therefore, unambiguously favorable to one set of firms and unfavorable to another. The question of the relative weight placed by any single businessman upon those effects which are unfavorable to him and those which are favorable, does not arise. There is, for instance, no firm that experiences (as a direct effect) both a reduction in profit and an increase in output. All that can be said about the interpretation of the price reduction is, therefore, what has

¹¹ The term durable assets is used rather than the expression capital goods because, according to most definitions, all intermediate goods are capital goods. The particular prices which most need to be reduced in order to lower the cost of investing (except in inventories) are those of durable equipment, construction materials, houses, etc. These may conveniently be described as the prices of durable assets.

been said above: that it will have a rather large unfavorable impact on the firms which reduce their prices and a more diffused but unambiguously favorable influence on the others. The latter is, perhaps, likely to be the more significant for the reasons already given.

As to the effect of this type of price reduction on expectations, little can be said that is not already clear. Its short-run effects are almost certain to be unfavorable; its long-run effects favorable. Indeed the whole case for this sort of change is that it would have many of the favorable effects of a general price reduction and few of the unfavorable ones. Current prices of assets would be lowered relative to expected future prices. But the reduction in profits would be limited to relatively few firms.

9. Conclusion

This review of the different types of price readjustment, if it is of any use, leads back logically to the question, proposed at the beginning of this paper, of the most desirable and most promising type of cost-price readjustment. In large measure it has already been answered, but piecemeal, and the parts of the answer need to be put together. It is submitted that the type of cost-price readjustment most likely to stimulate investment would be one involving (a) a reduction in basic costs, (b) a general reduction in all prices by at least the same amounts as marginal costs, or, better, proportionately with them, and (c) a more drastic reduction in the prices of durable assets brought about, if necessary, by a considerable narrowing of the profit margins of the firms that produce them.

Essentially this is a price readjustment of the first type coupled with one of the third. The case for a general reduction of basic costs and prices has already been set forth; also the reasons for believing that a reduction in the prices of assets relative to other prices would be favorable. Both changes may be combined, because they do not offset one another in any way. The above prescription is, therefore, a mere summary of conclusions already arrived at.

It is possible that the favorable influence of the above-described cost-price readjustment would be considerably stronger if the reduction in basic costs, like the change in intermediate prices, were greater in the capital goods industries than elsewhere. But this is by no means certain. There is a disadvantage in reducing basic costs in the capital goods industries more drastically than elsewhere, for such reductions affect income paid out and thus the demand for but not the costs of production of consumer goods. The advantage of this variation of the above price change depends upon whether its adverse income effects would be outweighed by the additional decline in the cost of investing that it would make possible.

The reader does not need to be reminded that this whole conclusion

depends upon speculation to a very considerable degree rather than upon proof. It is simply not possible to discuss the way in which changes in economic conditions affect business decisions without indulging in speculation. Yet, if economists have been reduced to such a condition that they must admit complete ignorance of the connection between economic changes and business decisions, the solidest foundations of our subject have melted away. Beyond a word of caution, then, no apology need be made for the speculative temper of much of the analysis.

What is rather more unsatisfactory than the method by which the conclusions are arrived at is their limited utility as answers to the practical question. Granting that a general reduction in all prices including basic costs, with special emphasis upon capital goods, would stimulate investment, the question of how important a stimulus it would be remains unanswered. But certain conclusions can be listed which do throw light on the question. One is that the direct effects of various types of price changes usually cancel one another to a considerable extent. Price reductions that have a favorable effect upon output do so because they cause business firms to start paying out a larger flow of real income at the expense of their profits or, at least, of their own savings. The view that if business firms in general would lower prices, the consequent increase in sales would enable them to maintain their profits simply does not rest on a secure foundation. It can be true only if and in so far as the price reductions stimulate investment. It is, therefore, circular reasoning of the most obvious sort to argue that price reductions will stimulate investment because, if investment increases, their adverse effects upon profits will be offset. There is no escaping the conclusion that the repercussions upon *profits* of those price policies that would achieve a larger aggregate output would be unfavorable to investment.

Since it is impossible, therefore, to find a type of price readjustment which will have unambiguously favorable direct effects, the main hope of stimulating investment through price changes lies in the possibility of making present prices appear low relative to future prices and incomes. It is not the changes in cost-price *relationships* that are significant for this purpose so much as the changes in the whole level of present costs and prices with respect to some vaguely defined norm. It goes without saying that a drastic price reduction which is believed to be final is much more effective for this purpose than a gradual, long drawn out decline in prices. It is this consideration that gives some validity to the contention that "readjustments should not be postponed" when a depression is started.

One other conclusion appears to be important in this connection. If price reductions are to have the greatest possible effect they must be so engineered that businessmen perceive all of the favorable effects and underestimate the unfavorable ones. This means, in turn, that the favorable effects should be

concentrated on few firms and the unfavorable ones widely diffused. The type of price change described above is recommended both because it could be a substantial one and because it would be more likely to be interpreted optimistically.

It is worth noting that the price changes which actually occurred between 1933 and 1939 were almost the exact reverse of those recommended above. Basic costs rose as did the prices of consumers goods and the increase in all prices of assets was greater than in those of non-durable goods. In only one respect were price movements during the thirties at all favorable. On the whole, basic costs seem to have increased more than the prices of consumers goods. In this over-all sense, profit margins appear to have narrowed, but it is doubtful whether the favorable effect of this development upon income paid out was sufficient to counterbalance its effect on the interpretation of cost increases and on expectations with regard to future earnings. Perhaps, if the behavior of prices and costs had been more stable, even if not close to the pattern described above, our heroic public spending would have initiated a sustaining revival.

PRIVATE INVESTMENT, FULL EMPLOYMENT, AND PUBLIC FUNDS

By OSCAR L. ALTMAN

Investment and the Flow of Income. Both Mr. Bissell and Mr. Kreps have treated investment principally from the short-run point of view. Over the long period the function of investment is to maintain and expand productive capacity; but in the short run we are chiefly interested in investment as an offset to savings.

Considered only in their physical aspects, the postponement of a new road for a year or two would not greatly affect transportation costs, and one year's delay in constructing a new refinery would not substantially modify oil output and oil prices. Even the drying-up of investment for two or three years would not substantially affect the capacity to produce consumption goods. The drying-up of investment does, however, seriously interrupt the flow of income. If \$1,000 is saved and invested, the money turns up as income within the community; if \$1,000 is saved but not invested, income is decreased, and production and employment follow the downward spiral. The unemployed suffer the most, but all parts of the community are affected in varying degree.

This offset to savings approach to the problem of investment is certainly the appropriate one for the analysis of the policies required to achieve and maintain a high level of national income and employment. Investment constitutes the principal offset to savings; but government borrowing for non-investment purposes, as well as increases in consumer credit, may be treated as offsets. In general, the higher the level of "grossness" employed in analyzing savings and offsets, the more revealing is the analysis.

The policies for reaching and maintaining full employment are directly related to investment. Five principal elements are involved in determining these policies: (1) the level of national income associated with full employment; (2) the volume of savings currently generated at this rate of flow of national income; (3) the volume of private and (normal) public investment that will probably be forthcoming at these levels of income and employment; (4) the volume of dis-saving that may be expected in the form of consumer credit; and (6) the volume of government investment, or of government expenditures for non-investment goods, necessary to absorb the remainder of the savings currently produced.

This approach to the policies needed to achieve a high level of national income demands the collection of new data and the refinement and extension of old data. In many cases the available data are incomplete, and much work is needed to fashion them into accurate and reliable bases for the determination of policy.

What is the relationship between national income and full employment? This question cannot be answered with great accuracy. But the relationship between employment and national income with prices constant is sufficiently regular to make possible a rough estimate of the amount of national income at 1939 prices that would be associated with full employment. It would appear that about 100 billions of national income at 1939 prices would furnish an opportunity for approximately full employment.

Measurement of the volume of savings that will currently be generated at full

employment (and that will be realized if the volume of investment is adequate for attaining full employment) is basic to the formulation of policies affecting the circuit flow of money. Yet measurement of current business and individual and governmental savings presents difficult problems. A current series on gross national income produced is required. This series, used in conjunction with the Department of Commerce series on income paid out, will indicate roughly the volume of gross business savings. Used for this purpose, the series on income paid out will need refinement, particularly with regard to savings in agriculture and in other segments of unincorporated enterprise. A current series on the gross savings of individuals is required, whether the series is based upon the income-expenditure approach used by the National Resources Committee in making its estimates for 1935-36, or upon the balance sheet approach used by Dr. Goldsmith in his estimates of saving for 1933-37.¹ Some attempts have been made to estimate the distribution of income for years since 1937, but these estimates are as yet highly tentative. Furthermore, the income-expenditure patterns found by the National Resources Committee may not be completely applicable to the estimated distributions for later years. Determining the volume of individual savings from income distributions and expenditure patterns is open to grave danger, for since savings are a relatively small residual in the computation, small changes in expenditure patterns will make large changes in the volume of savings. A current series on government saving is required. To determine governmental saving accurately requires the analysis of receipts and expenditures with an operating and investment budget. The deficits or the surpluses of governmental bodies do not represent dissavings or savings, since state, local, and federal governments do not classify expenditures to permit a ready or accurate segregation between outlays for durable goods and all other outlays.

The object of these studies of saving would be to determine the volume of saving currently generated at existing levels of income. This would suggest the volume of saving that could be currently generated at the levels of national income associated with full employment, and indicate the magnitude of the investment and other offsets required to maintain (or achieve) that level of national income and to realize that current accrual of savings.

The volume of investment and of other offsets to saving should be estimated several years in advance, in order to determine what additional volume of public investment, or of public dissaving, or of public stimulation to private investment, is required to fill the gap between anticipated savings and estimated investment. An important step in this direction has been taken with the National Resources Planning Board's six-year register of public construction. This register is designed to list the volume of public construction in immediate contemplation and the volume of construction that might be undertaken within the next six years. The projects are classified by agency, by type, and by urgency, so that in theory materials are available for the wise expansion or the wise contraction of a public works pro-

¹ *Consumer Expenditures in the United States, 1935-1936*, National Resources Committee (Washington, D.C., 1939); R. W. Goldsmith, with the assistance of Walter Salant, "The Volume and Components of Saving in the United States, 1933-1937," *Studies in Income and Wealth*, Vol. III, pp. 220-94 (National Bureau of Economic Research, New York, 1939).

gram. But no register of private investment is available. Excluding investment in inventories, business enterprises are responsible for more than three-fifths of the nation's outlays for construction and equipment in good years; and investment by business enterprises in plant and equipment totaled 10.1 billion dollars in 1929 and 7.6 billions in 1937, according to the estimates of George Terborgh. Estimates of investment in plant and equipment have been greatly improved in scope and currency in recent years through the work of Terborgh, Kuznets, Stone, the Department of Commerce, and others. But the determination of the historical record of private investment, no matter how carefully done and no matter how current, is not enough. It is necessary from the point of view of the economist to supplement it with current reporting on business investment plans. To some extent, with respect to factory and commercial construction, building permits and construction contracts awarded furnish some evidence of prospective business outlays. These, however, do not cover the field. It would be desirable to undertake the collection of data through questionnaires and field investigations relative to the investment plans of business enterprises over a three-year period. Schedules of prospective investment in plant and equipment by business enterprises, under varying conditions, could then be drawn up. It is interesting to note that Sweden within the past few years has undertaken a similar task.

Broadly speaking, this approach to full employment and to stable employment involves determination of the amount of investment which would in the ordinary course of economic activity be made at high levels of national income, and the use of additional public investment or dissaving to fill the gap between the anticipated volume of saving and this normal volume of investment. The measurements at first will be very rough. In the nature of the case they can never be very fine, but they will probably offer better guides to policy than any existing criteria.

It will be noticed that no suggestion has been made to modify the volume of anticipated saving. Mr. Kreps has argued very cogently, and to my mind convincingly, that this country needs a great increase in consumption. Appropriate fiscal and other policies, coupled with some reallocations of income, would substantially increase the volume of consumption. This does not mean, as I understand it, that the ratio of consumption to national income should necessarily be raised. It may mean only that an increase in the national income should start with higher consumption, which is the real measure of consumer welfare, and which would stimulate investment, rather than with higher investment, which would be depended upon in turn to stimulate consumption. The employment of progressive tax measures, when coupled with expenditures for housing, hospitals, and roads, need not change the rate of saving in proportion to national income, though it will change the components of the savings stream and the directions of investment.

If the ratio of consumption to national income increases, a smaller volume of savings must be channeled into investment, or offset in some other way, in order to maintain the circular flow of income. But it seems unlikely that any considerable or sudden changes will take place in the relationship of consumption to income. The economic system is the result of a long evolution and economic process. The end product is not completely reversible, and it is difficult, economically and politically, to modify it. It is no more possible in the short run to transform a high-savings economy into a high-consumption economy, even if this were desira-

ble, than it would be to unboil a hard boiled egg. It is impossible, too, as a measure of short-run adjustment, to transform a high-savings economy into a high-consumption economy during a depression and then back again during prosperity. For the economic system furnishes something more than capital goods and consumption goods and services. It furnishes human satisfaction through work. This does not mean that everybody wants to work all the time, nor at one job. Part of the satisfaction comes in the knowledge that full employment creates the opportunity that makes one free to give up one job and search for others. But no economic system can give satisfaction through work if this involves forced changes of job, of working area, or of salary for any large number of people. The problem of economic adjustment is thus similar to the problem of legal adjustment suggested by the statement that the law must be stable and yet it cannot stand still. Paraphrasing this, we may say that the economic system must constantly adjust itself to a changing balance between provision for the present and provision for the future, and yet these changes must take place in such a way that they affect relatively small numbers of people at any one time without affecting the aggregate volume of income and employment.

Funds for Private Investment. A consideration of the major sources of funds for business investment and the impact of the defense program on these sources is of prime significance not only from the point of view of the smooth flow of savings into investment, but also from the standpoint of the type of securities which become available to institutional and other savers, and the effect of the financing upon the post-defense economy.

The funds for financing private business investment come largely from three sources:

1. They arise internally from the current operations of the business, and are represented principally by a segregation of current receipts to provide for depreciation and depletion and by a further segregation of current receipts in the form of undistributed profits.

During 1923-29 business enterprises invested an average of 8.5 billion dollars per year in plant and equipment; they had available from retained earnings, depreciation and depletion an average of 16.4 billions per year. Their internal funds were therefore sufficient to finance three-quarters of these outlays. During the period 1935-37 business enterprises spent a total of 17.4 billions for plant and equipment; and they had 16 billions available from internal sources. Internal funds were sufficient to finance more than 90 per cent of their outlays for plant and equipment.² A. B. Hersey's analysis of the sources and uses of funds by fifty-

² See my testimony before the Temporary National Economic Committee, Part 9, *Savings and Investment*. It has been suggested by George O. May that in many cases book entries for depreciation "may be regarded as a recognition of an unpleasant fact or as an idle gesture—they will certainly produce no money for replacement if the company has no income from which a depreciation provision can be set aside." ("The Relationship of Depreciation Provisions to Replacement," *Journal of Accountancy*, May, 1940.) Mr. May explained that 46 per cent of the total depreciation and depletion charges reported on corporate income tax returns for the seven years ending 1935 were claimed by corporations which had no net income; and that these no-net-income corporations constituted 64 per cent of the total number of corporations.

It is, of course, true that the amounts of depreciation and depletion charged to current receipts are not necessarily earned. Not until they are earned are they available for in-

eight large corporations points to the same conclusion. In the period 1930-39 these fifty-eight corporations, having assets of more than 12 billion dollars, invested a total of 5.6 billions. Internal sources provided 83 per cent of these funds, while the capital markets furnished 10 per cent.³

2. The capital markets are a second major source of funds for industrial expansion. Business enterprises secure funds from institutional and other investors by selling bonds, notes, and stock. The literature on investment banking and much of the discussion in regard to the expansion of business investment stresses the notion that the capital markets, and the capital markets alone, are in overwhelming measure the source of funds for that investment. Any close scrutiny of the development of American enterprise will indicate that this has been and is largely a fiction. This fiction has obtained currency in no small measure because of the pre-eminent position which investment bankers have had in our society, a position so well suggested by John Moody's phrase "masters of capital." The hearings before the Temporary National Economic Committee on savings and investment indicate clearly that the role of the capital markets in financing business expansion was relatively small, not only in the thirties, but also in the twenties. Internal financing, considered together with the high flow of savings to savings institutions, helps explain the continued pressure upon interest rates, the small amount of security flotations in the thirties compared with the twenties, the increased importance of the direct sale of securities by corporations to life insurance companies, and the reduced role played by commercial bank loans. It is an interesting sidelight that the expansion and rising stock prices in the twenties were not accompanied by any great expansion in business outlays for plant and equipment.

3. Finally, public aid and public funds in one form or another constitute a source of funds for the expansion of business enterprise. Public funds and public aid help finance business investment, particularly in periods of war or in periods, such as the present, of national defense. Memory is short, and we tend to underestimate the bounties, the gifts, the tariffs, and the other encouragements which made possible the railroad, the automobile, the electric power, and other industries. Let us consider a few contemporary examples. The American Merchant Marine is currently undergoing a renaissance, a renaissance for which the Maritime Commission is almost wholly responsible.⁴ The aircraft industry has greatly

vestment. But in the calculation of funds arising internally and available for investment, retained earnings are added algebraically to depreciation and depletion allowances. If any corporation shows a loss, the total amount available to it from internal sources is less than the allowances for depreciation and depletion. If the net loss is greater than the charges for depreciation and depletion, the corporation has no funds available from internal sources. In other words, the total of retained earnings, depreciation, and depletion used in the above calculations was a *net* figure, and was available for investment.

That these funds were available for investment does not, of course, mean that they were invested. They may have been used, for example, to build up cash or pay off liabilities. (Cf. Eliot Janeway in *The Nation*, August 24, 1940.)

³ These are essentially the same companies discussed in Hearings Before the Temporary National Economic Committee, Part 9, *Savings and Investment*, pp. 3693-3695, for the period 1930-38. Mr. Hersey discusses these materials, brought up to date, in his paper on "Sources and Uses of Corporation Funds" before the American Statistical Association, December 28, 1940.

⁴ Admiral Land, Chairman of the Maritime Commission, recently noted that at the present time the tonnage of the American Merchant Marine, including private and Com-

benefited through public assistance, not only from governmental orders at profitable prices and from public subsidies in the form of mail contracts, but also from the results of public outlays for research, weather forecasting, and operation of airports at less than cost. The role of the Federal Housing Administration in stimulating residential construction; the role of the Reconstruction Finance Corporation in making loans for expansion, in reducing interest costs, and in unfreezing funds—these and other illustrations testify to the intimate relations of the government to private investment.

The government has taken an even greater financial interest in industrial expansion since the inauguration of the defense program. This interest may be indicated by the multiplicity of forms and procedures developed to finance the emergency plant facilities required for defense. These facilities may be financed in the following four ways:

1. Funds are obtained from private sources without the support of special amortization or depreciation allowances. This type of financing represents the operations of free private enterprise in its pure form. Presumably, in all these cases the inducement to invest is twofold. First, the attraction of profits on defense contracts, and, secondly, the high probability that the facilities will be useful in post-defense business operations.

2. Funds for investment are obtained from private sources, but the investment of these funds is assisted by special amortization allowances for tax purposes. Certificates of Necessity may be granted by the Advisory Commission on National Defense and either the Secretary of War or the Secretary of the Navy for new facilities certified as necessary for national defense. The Second Revenue Act of 1940 authorized the amortization over a five-year period of facilities so certified. If within the five-year period the facilities become necessary, taxes may be recomputed over the shorter period. On the other hand, the enterprise may elect at any time within the five years to depreciate the unamortized balance according to normal depreciation schedules. The significance of these provisions to plants already making substantial profits, and whose output for several years is buttressed by outstanding contracts, may readily be appreciated.

3. Funds are obtained from private sources or from the Reconstruction Finance Corporation, but these funds are protected by federal amortization payments. These payments are made in accordance with an Emergency Plant Facilities (EPF) contract, supported by three subsidiary certificates: (1) a Certificate of Necessity, stating that the facilities are required in connection with the defense program, (2) a Certificate of Nonreimbursement, signifying that no part of the capital cost of the plant is included in the price of the commodities produced with the emergency plant facilities, and (3) a Certificate of Government Protection, signifying that after the facilities have been amortized the title to them will vest in the government.

mission-owned and operated ships, is about 2 million tons, of which 1,291,204 tons represent the active and laid-up fleets of the Maritime Commission (*New York Times*, December 15, 1940). The role of government in the development of the merchant marine may be stated in another way. Close to 100 per cent of all the freighters and passenger ships (excluding tankers and vessels in coastal trade) were built with an average subsidy of one-third of the construction cost; and these operate with an average subsidy of one-third the operating cost.

4. Finally, the Emergency Plan Facilities may be constructed with public funds, but operated by private enterprise on a lease arrangement.

These methods of financing expansion of plant facilities to be owned or operated by private enterprise raise many questions of policy during and after the defense program. I propose to discuss only two such questions, and these only briefly: the provisions inherent in these arrangements for the ownership of these plant facilities, and the role of private funds in financing the expansion of these facilities.

Whether the investment in plant facilities is made in the first instance by the government, or whether these facilities are purchased by the government on the installment plan with amortization payments, the government will eventually have title to a substantial body of facilities that can compete with private enterprise. These government-owned facilities will in some industries (aircraft, for example) constitute a major part of capacity. Both the EPF contracts and the lease contracts for government-owned plants recognize that the government should not operate these facilities commercially. The latest form of the EPF contract contains a clause that:

The Government agrees, so far as it lawfully may, with respect to any facilities transferred to it . . . that it will at no time use the same or any of them for business or commercial purposes, provided that the Government may at any time use any such facilities for National defense. . . .

Hence, when these facilities are no longer required in connection with the defense program, the government may dispose of them in any of three ways: it may lease or sell them to private enterprise for commercial use; it may shut down the plants and maintain them as standby capacity; or it may dismantle the plants. Shutting down or dismantling plants, however, will in general probably prove uneconomical; and in either case, when applied to plants that can produce (directly or with slight conversion) everything from airplanes to typewriters, it will raise embarrassing questions of the distinction between business and industry, between finance and consumer welfare. Inevitably, the question will arise whether these facilities cannot be operated to *increase* the public weal in time of peace as well as to *protect* the public weal in time of stress. The far-reaching industrial requirements of a modern defense program, the conversion possibilities from peace to war uses and back again, will raise this question within a broader area than ever before. On the whole, the probabilities favor the sale (or lease) of these facilities to private enterprise. Arrangements now being effected provide that the operator of the emergency plant facilities has the right to purchase them at cost, less an allowance for depreciation which in some cases appears to be quite liberal. But this is the maximum price. The operator may purchase these facilities at a negotiated price lower than cost less depreciation. No other business enterprise has the right to secure these facilities (by purchase or lease) at any price unless the government first offers the operator the option to secure them at this price.

The role of private funds in financing the expansion required for the defense program may, in conclusion, be briefly noted. The volume of private funds raised for this purpose, through the sale of bonds or stocks, whether sold indirectly through the investment banking machinery or directly to financial institutions through private placements, is likely to be relatively small. During the World

War there was no great upsurge of security issues, according to the compilations of new and refunding issues by the *Journal of Commerce*. The Special Committee on Investigation of the Munitions Industry noted that "there is evidence that prime contractors have never been forced to borrow extensively in [the World] war and it is the policy of the War Department to save them from any difficulties arising out of the tightness of credit."⁵ The Committee noted further that the contracts used "practically eliminate any need for working capital."⁶ With reference to the du Pont Company during the World War the committee remarked that "the company built millions of dollars' worth of new powder plants, made substantial investments in the dye, paint, and automobile industries, and financed

TABLE I.—TOTAL SOURCES OF FUNDS, AND FUNDS SECURED FROM ADVANCES AND PAYMENTS ON GOVERNMENT CONTRACTS, AND FROM UNDISTRIBUTED GROSS INCOME, 1939*

Company	Sources of Funds (thousands)		
	Total	From Advances on Contracts	From Undistributed Gross Income†
Douglas	\$15,502	\$ 9,040	\$1,305
United	35,618	25,288	5,437
Consolidated	3,285	1,856	1,174
Boeing	321	1,302	3,132
Curtiss-Wright	41,869	33,654	3,923
Fairchild	700	259	337
Irving Air Chute	369	—	150
Lockheed	7,912	835	2,558
Martin	15,842	10,850	3,342
North American	12,196	7,558	2,393
Sperry	7,028	2,820	1,836

* Computed from the *Annual Reports* of these companies and from reports filed with the Securities and Exchange Commission.

† Undistributed profits plus depreciation and amortization allowances.

its own insurance, all without a single bit of financing from banks or private investors."⁷

In addition to advances for working and fixed capital, the independence of business enterprises from the capital markets is bolstered by the increased profits characteristic of periods of high industrial activity in general and of defense contract work in particular. It may be recalled that 1916-19 represented one of the golden periods of American business profits; and that compiled net profits, after intercorporate dividends, were higher in 1917 than in any year on record. The recent experience with corporate profits in Canada indicates that profits have increased substantially in volume, partly because of higher prices but principally because of the higher rates of output. In general, these higher profits, supported by increased depreciation and amortization allowances, increase the possibilities of self-financing.

⁵ Munitions Industry, *Report on War Dept. Bills S.1716-S.1722 relating to Industrial Mobilization in Wartime*, 74th Congress, 2nd session, Rept. 944, Part 4, 1936, p. 25.

⁶ *Ibid.*

⁷ *Ibid.*, pp. 25-26.

The airplane industry since 1934 illustrates these tendencies, perhaps in somewhat extreme form. Advances on government contracts constituted by far the largest source of funds for expansion; undistributed gross income (undistributed profits plus depreciation allowances) ranked second; and all other sources, including sale of securities and commercial borrowing, were far in the rear. The results for 1939 for all the major companies may be summarized as in Table I.

The increased possibilities of self-financing, the magnitude of advances on contracts, direct outlays by the government for plant facilities, amortization payments, and the readiness of the Reconstruction Finance Corporation to make defense loans at from 1½ per cent to 4 per cent suggest that expansion will not be greatly dependent upon funds tapped from the capital markets. It is probable this expansion will be largely represented by an increase in government debt rather than by an increase in business stock and bond issues.

SAVINGS, INVESTMENT, AND CONSUMPTION

By IMRE DE VEGH

Perhaps we can establish a connecting link between the papers of Mr. Bissell and Professor Kreps by starting with the familiar question of the relationship between *ex ante* and *ex post* savings.

1. *Ex ante* savings are withdrawals from the income stream, which are themselves a function of income. In the first instance they would result in a redistribution of liquid resources from those individuals and corporations who spend more than their incomes to those individuals and corporations who spend less than their incomes. In the second instance they would reduce the flow of the income stream, unless offset by new inputs into the income stream.

Such inputs have been described by Dr. Lauchlin Currie in his testimony before the TNEC as income producing expenditures that offset savings. In the ultimate analysis the net total that has been "saved" by an economy is, as Dr. Currie has pointed out, the amount of the offsets. This amount is, however, merely the difference between total outlay and total consumption outlay. This *ex post* concept of savings does have an important bearing on what we have described as *ex ante* savings. As Dr. Currie stated it in his TNEC testimony: "The problem of maintaining full employment is the problem of securing sufficient outlets for the savings that will accompany full employment." In other words, to the extent that income producing expenditures determine the level of national income, the *ex post* savings of today are the determinants of the *ex ante* savings of tomorrow. The problem is to make sure that the income-producing expenditures of tomorrow will be as great as, if not greater than, the *ex ante* savings that have been induced by today's income-producing expenditures. Today's income and the rate at which it is consumed will determine the amount of income-producing expenditure needed tomorrow to keep the system stable—or to make employment rise.

There is no way to weed out net *ex ante* savings from the available statistics; the only valid data are *ex post* figures. All we know about *ex ante* savings is that an economy with a habitually high rate of *ex ante* savings will tend to be more unstable and will have greater growth possibilities than an economy with a habitually low rate of *ex ante* savings. But we shall only know after the fact whether the *ex post* savings were greater or smaller than *ex ante* savings. The proof of the pudding is in the eating. As Dr. C. O. Hardy pointed out, all we really know is that if the national income has risen in a given period, "offsets to savings," i.e., income-producing expenditures, must have been greater in the aggregate than *ex ante* savings; if the national income has declined, they must have been smaller.

2. There are two possible explanations for the lag in our national income and for its dependence on the stimulus of deficit expenditures. It is either the stimuli applied to consumer expenditure that are less effective than they are believed to be, or it is the stimuli to other expenditure that have become less effective.

Let us therefore look first at what has happened to consumer incomes in the national income stream and see what conclusions the empirical evidence might suggest. After that we shall take up the question whether there have occurred

INCOMES AFTER FEDERAL INCOME AND SURTAX BY CLASSES
(Millions of Dollars)

Income Classes (in thousands of dollars)	5-10	10-25	25-50	50-100	100-150	150-300	300-500	500-1,000	1,000 and over	Total
1916	1,031	1,223	811	707	345	482	254	235	413	5,501
1917	1,784	1,606	965	762	344	388	160	156	198	6,363
1918	2,053	1,595	848	533	188	169	66	49	48	5,549
1919	2,862	2,247	1,122	710	239	208	73	52	54	7,567
1920	2,970	2,376	1,154	646	179	122	42	34	28	7,551
1921	2,310	1,831	867	466	112	85	29	18	18	5,736
1922	2,572	2,132	1,082	661	189	168	74	69	91	7,038
1923	2,599	2,435	1,247	725	225	199	93	70	116	7,709
1924	2,962	2,777	1,491	930	302	283	125	115	109	9,094
1925	3,445	3,471	1,911	1,271	494	552	284	273	355	12,056
1926	3,819	3,589	1,842	1,248	492	557	285	264	412	12,508
1927	3,875	3,674	1,933	1,378	549	663	357	314	502	13,245
1928	4,260	3,955	2,190	1,664	733	974	551	555	924	15,806
1929	4,472	3,965	2,060	1,485	671	928	531	564	1,021	15,697
1930	3,707	2,873	1,311	832	325	357	174	178	299	10,056
1931	2,795	1,975	781	483	173	183	87	87	139	6,703
1932	1,641	1,110	586	346	96	86	33	39	19	3,956
1933	1,503	1,057	578	344	99	99	37	36	59	3,812
1934	1,910	1,430	624	321	80	83	23	28	26	4,525
1935	2,234	1,718	776	423	112	106	41	36	33	5,479
1936	2,899	2,453	1,209	698	195	161	54	44	31	7,744
1937	3,087	2,464	1,140	629	170	142	50	40	24	7,746

Source: United States Treasury Department,

Statistics of Income for 1937, Part I.

Pp. 38-39 for net incomes, by income classes.

Pp. 39-40 for taxes paid, by income classes.

changes in the structure of the economy that would tend to reduce the volume of those types of income-producing expenditures on which the expansion of the national economy primarily rested in the past. Stated slightly differently, let us at that point try to see what the general nature of the factors may have been that now seem to tend to flatten the rate of transmission of derived demand.

To start with, let us take the distribution of incomes from the *Statistics of Income* of the United States Treasury. These data exclude income from wholly tax exempt government securities and they include capital gains. These as well as other statistical problems impair their value for our purposes. Unfortunately, other published samplings of income distribution are so defective as regards incomes over \$5,000 to \$10,000 that they leave us no choice. The Treasury data also have the advantage of affording year-by-year comparisons of reasonably homogeneous figures.

Clearly the only income that an individual can consume or save is that which is left to him after he has paid his taxes. Therefore the above table will show the breakdown of incomes by income classes over \$5,000 after the deduction of federal income and surtaxes actually paid for the years 1916 to 1937. State income and surtaxes are automatically deducted in computing net taxable incomes.

It will be appreciated that the effective tax rates have been very substantially increased since 1937, especially in the lower reaches of the income and surtax structure. Consequently it seems likely that the aggregate of all incomes over \$5,000 will, after taxes, be about the same in 1940 as in 1937, or possibly even lower, in spite of the fact that total income payments to individuals are likely to be between 3 per cent and 4 per cent higher.

As a further comparison, in 1929 incomes over \$100,000 amounted to 3.7 billion dollars after income tax and surtax. In 1940 incomes over \$100,000 should be in the neighborhood of 375 million dollars, after income tax and surtax, representing a decline of 90 per cent. Similarly, in 1929 incomes between \$5,000 and \$100,000 amounted to 12 billion dollars after taxes. In 1940 they will probably amount to about 7 billion dollars, representing a decline of 42 per cent. On the other hand, a comparison of the total income payments to individuals in 1940 with total income payments to individuals in 1929 suggests that there has been no significant reduction in the money incomes below \$5,000.

Next, we have to take into consideration yearly payments of federal estate and gift taxes. These have averaged somewhat below 400 million dollars in the last five fiscal years. They offset an equivalent amount of savings in the higher income brackets. Specifically, they must offset most of the savings of investment incomes in the brackets over \$25,000, since it must be the large investors who pay a very large proportion of the yearly estate and gift taxes. Estates up to \$200,000 occasionally do not pay as much as 10 per cent of the total collected and one has to include all estates up to \$400,000 or \$500,000 in order to get over 20 per cent of total federal estate tax collections. Estate and gift taxes collected by various states are a further offset to incomes and savings in the higher brackets.

Gifts and charitable contributions, contributions to educational institutions, etc., represent other sizable deductions from the higher taxable incomes, only partly deductible on the returns and therefore incompletely accounted for in our data.

3. With the time and means available it was not possible to compile a full estimate of the distribution of incomes, consumption expenditure, and savings after taxes and gifts. Nevertheless the figures already given suggest that there has occurred a phenomenal shift to the left along the income scale—i.e., from higher to lower levels—since the twenties in the distribution of incomes after taxes and an even greater shift in the distribution of savings.

If full weight is given to estate taxation, it would seem that in the taxable investment income brackets over \$100,000 there are not only no savings, but there is hardly any net income after taxes. The yearly payment of estate taxes by this group is close to their total income.

Consequently, total savings after the income and estate taxes on all taxable incomes over \$100,000 are almost certainly a minus quantity. The savings on a few large salaries and entrepreneurial incomes are likely to be more than offset by the dissavings on investment incomes.

The taxable incomes between \$5,000 and \$100,000 consist of about 3 billion dollars of investment incomes and 4 billions of other incomes. On the 4 billion dollars of other incomes the savings are unquestionably still substantial. Of the investment incomes after taxes about 1.5 billion dollars are in the \$5,000 to \$25,000 range and some proportion of these is undoubtedly still being saved. However, above that level total savings diminish rapidly and probably disappear altogether somewhere above the \$50,000 level.

Clearly there are many people enjoying relatively high salaries and other incomes who also have sizable property incomes, and an apportionment of their savings between the two parts of their incomes is empirically not possible. The distinction here drawn is nevertheless a real one. It involves the standard of living of the recipients of income.

The demolition of the standards of living of the well-to-do has not kept pace with the demolition of their investment incomes after taxes over the last ten-year period. Therefore the rate of consumption of investment incomes as a whole must be extremely high. On the other hand, the rate of consumption of high salaries and other non-investment incomes is probably still relatively low. It is the large salary that will enable those fortunate enough to have both investment incomes and salaries to continue to save. In the case of people with large salaries but no previous accumulations, the incentive to build up a fortune out of the large salary is obvious.

The massive dissavings on high investment incomes probably offset not only the savings on very high salaries but also a large part of the savings of medium investment incomes. In any event, all taxable incomes above \$25,000 after income and estate taxes are only between 1.6 and 1.7 billion dollars, so that the maximum that can be saved out of these incomes can only be a small percentage of the yearly total of gross "savings," or of income-producing expenditures.

The more than 5 billion dollars of taxable incomes between \$5,000 and \$25,000 might account for 10 per cent to 15 per cent of total annual savings at the outside. It seems, however, that the bulk of the yearly savings of individuals has to be sought elsewhere; namely, partly in the incomes below \$5,000 and partly in gross corporate savings, which will be discussed later.

4. If it were true that a high rate of consumption per se tended to stimulate na-

tional income and if it were true that a smaller proportion of high incomes was consumed than of low ones, the last few years should have been highly prosperous ones. The extraordinary flattening of the income pyramid which has taken place over the past decade should have resulted in a tremendous increase in consumption and this in turn should have resulted in great prosperity.

One reason why this expectation was disappointed is perhaps self-evident. The relevant factor is not what peoples' consuming habits are in relation to a given level of income. The important thing is what happens to *changes* in incomes.

If the people whose incomes are rising save a large part of the increments, the secondary effects of increments of income will be rapidly dissipated. In the short run the rate of consumption of increments of income—i.e., the marginal propensity to consume—appears to be low throughout the income structure. It is perfectly conceivable and indeed quite probable that the marginal propensity to consume of the wage earners who received large increments of incomes in recent years has been lower than the average propensity to consume of those who had their incomes taxed away from them. The accumulation of savings has migrated from high incomes to low incomes as the incomes of the low income groups were steadily being expanded in relation to the incomes of the high income groups, but total savings of individuals do not seem to have declined to the expected extent.

It may be an open question whether taxation aimed at the destruction of current savings is a sound tax policy in the long run. However, if we wanted to destroy individual savings through taxation we would have to increase taxes in the income brackets in which the bulk of individual savings is currently being accumulated. In other words, under present conditions the most drastic tax increases would apparently have to hit the low and medium income groups.

Increased taxes on the very high brackets will merely increase the rate of their dissavings. Increased taxes on the \$5,000 to \$50,000 group will not only reduce their consumption as well as the already relatively small total of their savings, but also raises the question whether we want to preserve a financially independent, educated upper middle class. The theoretical foundation of such a tax policy will have to rest on the social objective of establishing a classless society rather than on the economic objective of increasing the rate of consumption of the national income.

5. Implicit in the foregoing is an answer to the question whether a rapid elimination of inequalities of income distribution is the best way to stimulate total income payments.

In a stable society with a stable income and tax structure over a long period of time it may be true that a smaller proportion of high incomes will tend to be consumed than that of low ones, provided taxes in the high brackets are not expropriatory. Similarly, on general grounds it seems probable that an economy with a habitually high rate of consumption will tend to be stabler and will be less capable of growth than an economy with a habitually low rate of consumption. In the very long run it seems probable that a fairly even and very stable distribution of incomes will result in a habitually high rate of consumption.

On the other hand, such general propositions do not seem to tell us anything

about the all-important question of the consequences of changes in the income distribution during and in the years immediately following the transition. Dr. Lauchlin Currie's data for 1923-29 seem to suggest that with a relatively uneven distribution of incomes throughout the twenties the propensity to consume increments of income was very high. On the other hand, with a much more even distribution of incomes throughout the thirties the propensity to consume increments of income appears to have been relatively low. It seems that unless there are revolutionary changes in consumer habits as incomes rise, unless a sense of perfect security encourages the individual to consume a very high proportion of increments of his income, our economy will continue to need a high level of investment outlay in order to reach and maintain full employment, regardless of the actual distribution of incomes.

6. Corporate savings are very important in the yearly total. According to Dr. Kuznets' figures published by the National Bureau of Economic Research, gross corporate savings were a minus quantity in 1932 and 1933. More recently yearly gross corporate savings may have run as high as 8 to 10 billion dollars, though they are still below pre-1929 levels. Net corporate savings seem to have been a minus quantity for a number of recent years and still seem to be relatively small.

It would probably not be in the interest of the American economy to enforce less conservative accounting practices on corporations. Both in the 1921 depression and in 1931-32 the lack of liquidity of American corporations contributed drastically to the deflation both through an enforced liquidation of inventory and through other means. Their present high liquidity is likely to give a greater stability to the corporate structure in future depressions than it had in the past. Furthermore, and this is an important point, the accumulations of corporate reserves are gradually becoming the major if not the only source of new venture capital.

Among individual savings it is only those of the wealthy that are or should be available for the purpose of new equity financing. However, savings out of large incomes and savings out of investment incomes generally are continuously becoming less important.

On the other hand, small savings and savings out of earned incomes in the middle brackets are continuously becoming more important. The man who saves out of a relatively small income or out of an earned income in almost any bracket except the very high ones should not, and as a rule does not, speculate in equities, new or old. His money goes directly or indirectly into fixed interest bearing securities. Life insurance companies and savings banks—who do most of the indirect investing for them—do not and should not supply venture capital to new industry any more than this class of individual should.

In this connection it is also noteworthy that rich people now need larger liquid resources than they used to, owing to the massive increases in income taxes and estate taxes. On the other hand, the drastic shrinkage in their incomes after taxes in itself constitutes an unprecedented pressure on them to seek income, i.e., to keep every available cent invested.

7. At the same time it would be a mistake to overrate the supply problem of venture capital.

Long-term investment opportunities which are considered profitable will pre-

sumably always attract capital. There undeniably exist certain technical difficulties of finding venture capital for small enterprise, but this is a special problem that is gradually beginning to receive the attention it deserves. On the other hand, the destruction of large private accumulations of wealth has not yet progressed far enough to make venture capital absolutely unavailable. The investment of previously accumulated, or even of newly created, bank deposits is just as genuine an offset to current withdrawals of any kind from the income stream as the reinvestment of the current savings themselves.

In spite of an enormous pressure on individuals and businesses to find profitable outlets for their bank deposits, a great many investment outlets that would have been considered profitable in the past now seem to have become submarginal. This does not mean that there is no need for additional investment. If it were so, no bottlenecks of productive capacity could appear in any significant volume. Yet currently our economic system begins to be riddled with bottlenecks of production.

It is a truism that if we reach full employment through rearmament spending we will have shortages throughout the economy. In the past the appearance or the anticipation of such bottlenecks usually attracted a large volume of new venture capital. Today they do not appear to have this attraction. The same phenomenon was observable in 1937, when many industries were approaching effective capacity operations, and the expansion broke off as soon as there was a marked decline in the net contribution of the federal government to the national income.

8. It seems that something must have forced the American entrepreneur to make the smallest possible long-term investments and that it was this enforced retardation of investment which in turn may have made a major contribution to the retardation of economic revival during the past decade.

Many of the grievances and many of the criticisms of recent policies voiced by businessmen are doubtless open to criticism on scientific or other grounds. On the other hand, they are symptomatic of the drastic change in the social environment which has occurred to the detriment of businessmen and which appears to have scared them so thoroughly as to have increased their liquidity preference beyond all known precedents.

Prior to 1929 by and large most of us lived in a fool's paradise. Nobody was psychologically or intellectually prepared for the Great Depression. When it came it clearly marked the end of an era. It was followed by a period of the gravest uncertainties abroad, which in themselves must have had a powerful retarding influence on the incentive to invest. In addition, a number of major reforms was instituted in the fields of labor, taxation, and direct government intervention in enterprise. These reforms have created a period of transition, during which the traditional processes of calculating future entrepreneurial profit possibilities did not seem to function.

A period of transition is of itself a creator of uncertainties which necessarily have to reduce the incentive to invest. The lack of psychological preparation, the speed with which reforms were enacted, the impossibility to predict at which point the reforms would be considered completed, on top of the world-wide changes that have occurred, clearly could not have failed to affect the normal system of anticipations of the American entrepreneur.

It seems that the chronic unemployment has at least in part been the cost society had to pay for the scale of the reforms and for the speed with which they have been enacted. In the absence of evidence to the contrary, it has to be assumed, however, that once stability to the economic and social structure has been restored, the end of the reforms temporarily reached, this retardation will tend to disappear. There exists, of course, the possibility that we will eventually have progressed so far along the path to state capitalism that no reversal will be possible. A fully developed system of state capitalism or state socialism would be entitled to very serious consideration; but is outside the terms of reference of today's discussion.

9. It may be worth while to take up a few points that might support this contention of the retarding effects of transition. From the viewpoint of the incentive to invest, wage increases which manifestly represent the growing political power of labor unions must have a dampening effect. The entrepreneur has no way of knowing the point at which the expansion of the unions' power will end. Consequently he has to enter into his calculations of productivity of new investment a scale of perpetually increasing wage rates over the life of that investment. In order to err on the safe side he will probably tend to overrate probable future wage increases.

Changes in the tax system have acted in a similar direction. All taxes are withdrawals from the income stream. The reflationary effects of the expenditure of tax revenues over the national economy as a whole cannot offset for the few large tax paying corporations and individuals the drastic and immediate shrinkage in disposable income that they undergo. During the years of consecutive tax increases, the tax increases in themselves constitute a powerful motive for taking no chances. Liquid resources have to be built up and profit expectations have to be reduced in line with one's estimate of future increases in taxation. Furthermore, during the period of the sharpest increase in taxation, the tax system embodied certain features extremely harmful to new private investment.

The treatment of long-term capital gains as income is an ancient but pernicious feature of our system. Short-term speculative gains are taxed in many countries with a modern income tax system in one way or another, but especially our pre-1938 system of treatment of long-term capital gains was unique.

As long as the tax rates on the top income brackets are relatively low, and as long as profit opportunities are believed to be great, the system has some indirectly harmful effects, but is no major hindrance to private capital investment. If, however, the principle is maintained while top bracket income taxes are increased to the level they attained five to seven years ago, then the odds are so heavily loaded against the large investor in equities that a large part of new ventures which would otherwise be considered to offer reasonable speculative attractions becomes wholly unattractive. If the wealthy individual can keep 100 per cent of the losses, but only 20 per cent or 30 per cent of the gains, it will be hard to find a new venture that is a sure enough bet to make him take a chance on it.

The tax reform of 1938 has granted important alleviations in this respect. However, as long as the incomes themselves that are derived from successful long-term capital investment are subject to very high rates of double taxation anyway, and the principal accumulated is sooner or later inevitably subject to our

very heavy estate taxes, it is questionable whether it is worth while to have any tax at all on long-term capital gains.

Government action of any kind can have enormous significance for the anticipations of the entrepreneur. Such government action is in a sense always the expression of the social environment. This environment was extremely favorable to private capital during the nineteenth century, in this country perhaps until 1929, and the result was an immense expansion in private investment activity. The state either did not interfere or if it did interfere it was on the whole beneficially to capitalist interests.

At the present time the government is still doing a great deal to stimulate the national income, not only through deficit financing, but also through activities of the Federal Housing Authority, the RFC and other government agencies promoting investment and giving assistance to business in general. However, in other fields the change in the social environment to the detriment of the entrepreneur appears to have strongly deflated his expectations. Furthermore, the enormous increase in tax collections in itself undoubtedly nullified to some extent the stimulus given by the deficit.

10. Increases in gross government outlay represent additional inputs into the income stream. Increased tax collections represent additional withdrawals. Such withdrawals might have some deflationary effects even if the tax structure is unchanged, merely due to the highly progressive tax rates, which take rapidly increasing proportions of additional income. If the rates themselves are increased, especially if they are made more progressive, they can deflate very sharply the very segments of the economy which are most important in a system of private capitalism; namely, the venture capital segment.

This point has important bearing on our final question; namely, whether an income structure still further flattened by taxation will be less vulnerable to a postwar deflation or not.

At present rearmament alone appears well on the way to solve the problem of idle savings—small or large—by creating outlets for them. It provides an "offset to savings" large enough to solve the problem of unemployment of men and resources, unless further increases in taxation reduce consumption and private investment once more.

It is probable that at some time in the future the rate of armament expenditure will become so high as to create inflationary dangers and that additional taxation will be necessary for the purpose of restricting private outlay for consumption and nonessential investment. In judging the appropriateness of a given tax measure we will, however, always have to bear in mind its effect on the income stream, both in the short and in the long run.

11. Clearly the American economy is very different from the European ones in that it is more than self-sufficient in a very large number of consumer essentials. Therefore the familiar problem of foreign exchange shortages and resultant redirection of productive effort, rationing of consumption of necessities, etc., probably will not arise until a late stage of a major war effort, if at all. The problems of metal consumption generally are likely to become acute sooner, but will have to be solved by direct control rather than by general consumer deflation. The waste accompanying general consumer deflation is so great and the proportion that

metal consumption by consumers represents is still relatively so small a portion of total consumer outlay that for the time being general deflation through taxation is an unnecessarily wasteful and hurtful alternative. Later on it might become inevitable, especially if we enter the war. At that time it will be the taxation or rationing of consumption that will be the only way to release the productive resources the government might need, because the entire income of the present income tax paying classes is no greater than the amounts we might easily be called upon to expend on armament. In the meantime it seems as if a reckless outburst of fiscal orthodoxy were one of the most immediate dangers facing us. A blanket raising of existing normal tax and surtax rates will result in a monster tax structure that creates long-term serious problems of its own.

During periods of relatively high investment activity so many incomes will temporarily move into the higher brackets that the budget will suddenly be balanced and very quickly overbalanced as soon as the rate of total federal expenditure begins to decline. After the peak of the rearmament effort, or, if we do enter the war, after the peak year of the war expenditures, there will be one year in which tax collections will be at an all time record, while federal expenditures will have begun to shrink. That year must become a crisis year similar to 1937, only on a far more important scale. To make matters worse, that year will be the one in which the armament workers, or the soldiers and the armament workers, will have to be reabsorbed in private industry. In other words, the powerful self-balancing feature of our budget due to the extraordinarily sharp progression of tax rates is likely to deflate the national economy most sharply when the stimulus of deficit expenditures will be most needed in order to absorb the workers up to then engaged in armament production in other fields of enterprise.

12. Until the expansion of consumption in the low and medium income brackets becomes a problem necessitating direct taxes on consumption, the healthiest method of obtaining additional revenue would seem to be a concentration on excess profits and excess income taxation, going through the entire economic system. The principle of taxing increments of income more heavily and far lower down the income scale than standard incomes throughout the system seems especially appropriate for armament and war finance, because these increments of income in so many cases will be directly or indirectly attributable to armament outlay. If individual wage increase taxes deductible at the source are not considered politically expedient, the next best check on a dangerous consumption boom would be a compulsory and not transferable loan to the government of all increments of income, large or small, perhaps in the form of a very high social security contribution payable out of all wage, salary, and profit increases subsequent to January 1, 1941.

Such a scheme would have the added attraction of a self-unbalancing feature at the end of the armament boom. As soon as the armament outlay slackens, the excess profits and increments of personal incomes will tend to disappear. With them will disappear this segment of the government's tax revenue. However, in the first year of declining expenditures this will not be enough, and a drastic reduction of tax rates, especially of taxes on consumption, will doubtless be needed to offset the drop in spending. Some subsidy to housing and perhaps to some other

industries, at least until the demobilized men are fully absorbed in trade and industry, also promises to provide fruitful avenues of smoothing the transition.

The postwar problems will depend not only on the size of the war effort but also on the methods employed to cope with the emergency. Therefore it is an entirely open question whether the private enterprise and investment system will have enough resiliency left in it to regain some of the positions it will have surrendered.

All we can say today is that war economy creates not only economic but also social and political problems of such seriousness that the solutions found will affect the lives of generations in one way or another. All we can hope for is that the attempts to solve the problems will be made in the light of reason and not in the heat of passions.

UNEMPLOYMENT IN THE UNITED STATES, 1930-50

(Two main papers and one review paper)

UNEMPLOYMENT IN THE UNITED STATES, 1930-40

By PAUL WEBBINK
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The ten years just past have been marked by the most extensive and prolonged unemployment ever experienced in the United States. The active interest of American economists and commentators in the phenomenon of unemployment has in the last few years come to seem so natural and inevitable that it is easily forgotten that earlier American economic writing had traditionally dismissed unemployment as a minor and evanescent incident in the functioning of the nation's economy. Only a little more than two decades ago Frederick C. Mills found after reviewing the existing literature that "intensive study of the problem of unemployment is a very recent development in the United States." Though, he said, "the spectacle of large numbers of able-bodied men out of work during periods of industrial inactivity" had caused "brief flurries of excitement, characterized by generalizations of hobby-ridden individuals as to the causes of the phenomenon, and by appeals for immediate remedies essentially of a superficial character," nothing even approaching a scientific analysis had yet followed.¹

Passing over for the moment the question to what extent this stricture might be said to remain valid in large part today, there will be little disagreement with the opinion that his observation was still very much to the point a decade ago. In spite of a few major individual contributions with respect to labor turnover, employment regularization, and certain other special problems, American economists during most of the nineteen-twenties by and large seemed to continue to share the view current a generation before when Richard T. Ely had considered it necessary to justify the inclusion in his *Outlines of Economics* of a chapter on "Expenditures for the Poor and the Unfortunate" by saying that while "there are those who deny that the problems here discussed are economic problems," it was his view that "if these things in their cost to society, in their loss to productivity and their demoralization of organized industry, do not affect the problem of man in his relation to wealth, what things do?"²

Though a spurt of active concern with the causes of unemployment and

¹ Frederick C. Mills, *Contemporary Theories of Unemployment and Unemployment Relief* (New York: Columbia University, 1917), *Studies in History, Economics and Public Law*, LXXIX, 1, 118.

² Richard T. Ely, *Outlines of Economics* (New York: Chautauqua-Century Press, 1893), p. 334.

with ameliorative measures developed during the social and economic ferment of 1909-15 and revived briefly in the immediate postwar years, it was short-lived. The unexpected ease with which demobilization and post-war readjustment took place in the United States, and the prosperity of the years which followed, pretty generally submerged further efforts toward the "scientific analysis" which Mills had found wanting in 1917. The work of the individual economists who persevered in studying unemployment lacked the sustained interest of their colleagues and any continuing mechanism for integrating the results of their research; neither public nor private agencies pushed much further, for instance, the suggestions advanced by the 1921 President's Conference on Unemployment.

A reversal of the general disinterest appeared possible when, during the aftermath of the temporary upswing of unemployment in the winter of 1927-28, the initiative of a small group of economists brought about the passage of a resolution authorizing a Senate Committee to investigate "the causes of unemployment and the relation to its relief" of a variety of possible governmental or private measures. The report which in March, 1929, resulted from this investigation explained that difficulty had been encountered in holding the attention of the members of the Committee, because of the conflicting committee meetings with which senators had been beset, but expressed the hope that the investigation had nevertheless "contributed to an aroused interest in the subject," and that the survey made would represent "another advance" in the effort to "solve" the problem of unemployment.³ A rather striking résumé of the state of thought about unemployment just prior to the decade of the thirties is afforded by the "suggestions and recommendations" which the Committee presented:

1. Private industry should recognize the responsibility it has to stabilize employment within the industry. The Government should encourage this effort in every way, through sponsoring national conferences, through publishing information concerning the experience had by industries in this work, and through watching every opportunity to keep the thought of stability uppermost in the minds of employers.

2. Insurance plans against unemployment should be confined to the industry itself as much as possible. There is no necessity and no place for Federal interference in such efforts at this time. If any public insurance scheme is considered, it should be left to the State legislatures to study that problem.

3. The States and municipalities should be responsible for building efficient unemployment exchanges. The Government should be responsible for co-ordinating the work of the States so as to give a national understanding of any condition which may rise and so as to be able to assist in any national functioning of the unemployment exchanges.

4. The existing United States Employment Service should be reorganized, and every employee should be placed under civil service.

5. Efforts should be made to provide an efficient system for obtaining statistics of unemployment. The first step should be taken by the Bureau of the Census in 1930, when the bureau should ascertain how many were unemployed as of a certain date and how many were not seeking employment and yet were unemployed as of that date.

6. The Government should adopt legislation without delay which would provide a system of planning public works so that they would form a reserve against unemployment

³ U. S. Congress, 70th, 2d sess., *Causes of Unemployment* (Senate Report No. 2072, 1929, presented by James Couzens, chairman, Committee on Education and Labor), p. vi.

in times of depression. States and municipalities and other public agencies should do likewise.

7. Further consideration might well be given to two questions, the effect had on unemployment by industrial developments such as consolidation of capital, and the necessity and advisability of providing either through private industry, through the States, or through the Federal Government, a system of old-age pensions.⁴

Modest, and even archaic, as these suggestions may seem today, they appeared very far in advance of popular and governmental thinking in 1929. The enactment of even a statistics-gathering federal public works "planning board" was put off for two years, and legislation for a thorough overhauling of the employment services was not enacted until 1933.

That unemployment, both in its current manifestations and as a possible major problem in the future, no doubt well merited study was being admitted by a growing number of economists and officials by the end of the twenties. This view, however, competed with the optimistic belief held strongly by the general public and by a goodly number of economists as well, that a permanent plateau of prosperity had been attained and that the possibility of another serious depression hardly required earnest consideration. Studies of unemployment, or serious examination of possible ameliorative measures in the event of an unemployment crisis, were therefore easily put off until a more leisurely future, to permit concentration on the immediately pressing issues of farm relief, tariff revision, and the functioning of the securities markets.

The Probable Volume of Unemployment during the Thirties

Within a few months after the stock market collapse of October, 1929, unemployment had been catapulted from its status of a vague worry to be considered some future day into the position of one of the country's foremost preoccupations. Unemployment increased steadily, with only a few temporary setbacks, from the fall of 1929 to the spring of 1933. Even a cursory reference to the several existing estimates of unemployment will amply show the rapidity with which unemployment established itself as an economic factor of the first order of importance.⁵

For March, 1930, the estimates range from nearly 3,250,000 to more than 4,000,000. A year later these had doubled to between 7,500,000 and almost 8,000,000. By March, 1932, a further increase of roughly 50 per cent had occurred, bringing the estimates to between 11,250,000 and

⁴ *Ibid.*, p. xv.

⁵ The five series of estimates most commonly used, those of the National Industrial Conference Board, Robert Nathan, the American Federation of Labor, the Congress of Industrial Organizations, and the Alexander Hamilton Institute, are appraised critically by Russell A. Nixon and Paul A. Samuelson in "Estimates of Unemployment in the United States," *Review of Economic Statistics*, August, 1940, pp. 101-111, and the limiting factors underlying all current unemployment estimates are pointed out by Arynnes Joy in "Statistics of Employment and Unemployment," *Report of Sixth Annual Research Conference on Economics and Statistics of the Cowles Commission for Research in Economics* (University of Chicago, 1940), pp. 84-87.

nearly 12,500,000. Then came the peak early in 1933. By March, 1933, according to the independent estimates of Dr. Woytinsky, nonagricultural employment had fallen more than 8,050,000 over the spring of 1930, while the supply of persons who might normally be considered to be seekers of gainful work had during the same time increased by 1,200,000. Adding to these an estimated 1,850,000 "additional" workers brought on the labor market through the unemployment of usual breadwinners, and the approximately 3,200,000 persons whom Woytinsky estimates as already unemployed in April, 1930, a total of 14,300,000 is reached. Other estimates for March, 1933, range from Robert Nathan's 13,577,000 to the National Industrial Conference Board's 14,586,000, the American Federation of Labor's 15,389,000, and more than 16,000,000 on the part of the Congress of Industrial Organizations.

The spring and summer months of 1933 brought the "NRA boom" and a sudden fall of 3,000,000 or 4,000,000 in the number of unemployed. This still left unemployment at a level of 10,000,000 or 11,000,000 but a gradual diminution occurred during the next four years, and by September, 1936, the volume of unemployment was set by various estimators at between 5,378,000 and 8,145,000. A sharp increase resulted from the renewed depression of the winter 1937-38, reaching, according to Woytinsky, a total somewhat over 9,000,000 in March, 1938, or, according to others, a level of 10,000,000 or 11,000,000. That a decided drop in unemployment has taken place during the subsequent two and a half years is recognized by all of the estimates; the magnitude of the drop, as the concluding pages of this paper point out, is still a controversial issue.

It would require an immoderate rashness to try at this point to identify the specific factors which resulted in the fact that unemployment was throughout the decade a problem of major importance. In a broad sense the factors responsible for the tremendous volume of unemployment were the factors responsible for the depression as a whole. It is hardly feasible, however—either now or in the future—to obtain agreement upon the proper weights to each of the forces which contributed to the sum-total, including the condition of the world markets, the influence of internal financial and industrial policies, the role of governmental measures, technological changes, shifts in the composition of the population, and changes in standards of consumption and in the desire of individuals to enter the labor market or to increase their participation in it. The impact of most or all of these influences has, however, no doubt already been examined at length in the preceding papers of this year's program of the Association. The pages which follow are directed, therefore, toward an examination of certain broad aspects of the supposedly ameliorative measures evolved in the course of the thirties and upon related questions concerning the over-all significance and extent of unemployment.

The Range of the Ameliorative Measures

No unanimity of opinion is ever likely to develop concerning the range of the measures which can properly be classified as "ameliorative" or "relief" in character. The first difficulty is that as concern over the volume of unemployment increased, the claim that a particular proposal would "relieve" the unemployed, or by reducing unemployment would shrink the need for relief, became a stock polemical device of government officials, of political leaders, and of those economists and commentators who became impressed or enamoured with the anticipated efficacy of particular "remedies." For example, income tax reduction proposals and the drive for a general federal sales tax in the early thirties were described by their proponents as "relief" measures. It would be difficult to find a major governmental policy enacted or urged from 1929 on, whether with respect to agriculture, financial institutions, public utility regulation, or taxation, whose advocates did not rest their case at least partially upon the contention that a beneficial reaction upon the extent of unemployment would follow. In the latter half of the thirties the relief-of-unemployment argument thus became the most potent single weapon of the "large-spending" school of economists and governmental advisers. An examination of the policies for the amelioration of unemployment in these terms would obviously require a review of the entire course of governmental policy and of business activity throughout the decade.

Much more immediately related to the unemployment problem are the measures relating to the length of the work week. Work-sharing and job rotation were the "remedies" given primary emphasis in the first years of the depression by federal officials and by many industrial leaders. It is certain that work-spreading for a while eased the impact of unemployment upon the employees of many establishments and of some communities generally. However, save in limited exceptional circumstances the constantly augmented slackening of industrial activity and the passage of time had by 1932 largely worn out the effectiveness of work-spreading upon an individual enterprise or single community basis.

A renewal of the drive to spread work by shortening hours came, this time under direct governmental stimulus, with the establishment of the NRA in 1933. What part the NRA in its early phases played in producing the estimated drop of 4,000,000 in the number of the unemployed during the second and third quarters of 1933 is again something on which, as on so many other points in the record of unemployment during the thirties, general agreement is hardly likely. It is probably universally admitted that the enthusiasm with which the initiation of the NRA program was greeted did produce a definite improvement in the country's prevailing mood. Beyond that, however, it must be remembered that "the NRA did not . . . represent a clear and unambiguous program having definite consequences

moving in a single direction" and that neither "is it possible with assurance to isolate the effects of the NRA from those of the many other forces present during its existence."⁶ Few would by now insist upon a higher estimate than that of the Brookings Institution which attributes a possible re-employment of from 1,750,000 to 2,000,000 individuals to the operation of the NRA's code hour limitations, and even this is dependent upon individual opinions concerning the NRA's over-all effect upon the course of production.

The first two years of experience with the Fair Labor Standards Act of 1938 do not yet provide sufficient evidence to gauge its effect upon employment and unemployment. The Act's first major objective, that of establishing a 40-hour week, became operative only two months ago, and the general 40-cent minimum hourly wage will not go into effect until 1945. In normal times the next couple of years would doubtlessly have demonstrated whether the Act is likely to cause an increasingly sharp segregation between a group of steadily-employed efficient workers and a more or less permanently displaced group, or whether, subject to some transitory unemployment due to the disappearance of marginal business establishments, it may instead result in shifting workers into industries offering both greater productiveness and a greater individual return. Whether these effects will be clearly discernible during the period of defense preparation seems doubtful.

The Public Works Programs

When one turns from the complexities of the measures affecting the volume of unemployment indirectly to the programs intended specifically to ameliorate the individual effects of unemployment, one distinction at first seems entirely clear. Postponing for the time being consideration of the unemployment compensation program, most discussions of unemployment policy assume a clear-cut line between the "unemployment relief" measures of the thirties and the contemporaneous public works programs. Usually, furthermore, the various early state and local emergency road-building or other construction programs are disregarded and "public works programs" are taken to comprehend the augmented federal construction appropriations of 1930-32, the self-liquidating loan provisions of the 1932 Emergency Relief and Construction Act, the \$3,300,000,000 works appropriation of the 1933 National Industrial Recovery Act, and the various and sundry construction appropriations or presidential allocations of subsequent years. Often, indeed, the contrast is cast in the simple terms of a distinction between the activities of the PWA and those of the FERA-CWA-WPA sequence of organizations.

⁶ Leverett S. Lyon, Victor Abramson, and Associates, *Government and Economic Life* (The Brookings Institution, 1940), Vol. II, pp. 1059-1060.

The problem of definition is actually much more complex. It may, for instance, be presumed that the distinction is essentially one between heavy construction on the one hand, and a potpourri of light construction work relief activities and direct relief programs on the other. This overlooks the fact, however, that WPA projects have included many buildings and other construction operations of a most substantial character. When one examines a document such as the Public Works Administration's brochure of last year, *America Builds: The Record of PWA*, there are included with other construction achievements items amounting to more than a quarter of a billion dollars for the building of naval and coast guard vessels, aircraft building, machine tools for navy yards, pest and disease control, and a variety of other matters which hardly come within the traditional concept of "public works" activities. An attempt to trace precisely the record of public works activities undertaken on account of the depression is practically hopeless for two reasons: the sums appropriated were often in large part reallocated to purposes considered socially useful but only vaguely or not at all related to construction, and government officials have since the very first year of the depression succumbed almost without exception to the temptation to lump together all construction expenditures, whether emergency or "regular" in character, in order to magnify the size of the ostensible effort to alleviate unemployment. Even were a distinction to be attempted, however, its meaningfulness would be limited; no one can say with assurance, for instance, what sums would or would not have been spent for railroad grade-crossing elimination in the middle thirties if the depression had not occurred.

It seems more sensible, therefore, to evaluate the depression public works activities in the light of the usually accepted statistical series measuring the total value of private and public construction.⁷ The first striking fact is that total public construction which, including certain maintenance expenditures, amounted to about 3,250 million dollars in both 1928 and 1929, rose above this level within the past decade in only three years—1930, 1931, and 1939—and never by more than 400 millions.

State and local public works expenditures responded to appeals for intensified activity by increasing in 1930 to a peak of 3,288 million dollars, representing 90 per cent of all government works expenditures in that year and an increase of 330 millions over 1929. The state-local expenditures thereafter, however, declined steadily, though not as dramatically as the shrinkage in private construction from over 10 billion dollars in 1929 to about 2 billions in 1933. Public construction had by 1933 fallen, if separate and clear-cut work relief programs are excluded, to a little less than 1,750

⁷ The statistical data used in this section have been derived from the table "Estimated Value of Private and Public Construction, including New Construction, Maintenance, and Work-Relief Construction," in *Survey of Current Business*, September, 1940, p. 14.

millions. The decline would have been still greater but for the slow increase in federal construction which by 1933 reached a total of 665 million dollars as against 275 millions in 1929.

During the remainder of the decade public construction—still excluding the separate work-relief programs—was gradually augmented as the result of a slow growth in state-local financing of public works and a much more rapid spurt in federal financing, until in 1939—and also in 1940—the predepression level was exceeded by about 100 millions. Meantime private construction began its recovery and in 1939 reached a total of 5,311 millions, somewhat over half of the 1929 level. During the thirties federal expenditures for construction were about 6 billion dollars larger than if the federal government had limited itself to its predepression construction activities. Large as this sum is, it was more than counter-balanced by the shrinkage in the state-local financing of public works which, taking the decade as a whole, totaled something like 11 billions less than would have been the case had state and local governments been in a position to continue construction at the 1928 or 1929 rate. The startling nature of these figures is offset in part by the fact that from 1932 on the federal outlays represented in considerable part merely a substitution of federal credit for state or local borrowing.

The figures which have just been cited are not intended as a means of decrying the actual achievements under the public works programs. Substantial public improvements were effected. Large numbers of wage earners—the reported total rose at one time in 1934 to nearly 650,000 in direct employment upon federal public works activities—were afforded employment at a time when certainly many of them would otherwise have been unemployed. Had public construction dwindled as rapidly and as far as private building, the critical situation of the years 1932 and 1933 would doubtlessly have been greatly intensified, and in subsequent years public works no doubt contributed in some measure to the process of recovery. Taking the decade as a whole it may well be argued, however, that the pronouncements and excitement at various stages of the depression over the public works programs were rather greater than the realities involved. The net effect of the programs is of course larger if the "multiplier" theory is accepted, but, after all, the process of "multiplication" of employment and industrial activity presumably must have been occurring at similar rates in the predepression years.

There continues to be ample opportunity for speculation about the extent to which the public works actually undertaken may have served as a break upon the depression or a spur to recovery, about the effects which might have been produced had the timing or the volume of expenditures been altered, and about the extent to which greater or lesser results might have been obtained if at certain times effort had been concentrated more largely

upon attempts to apply direct stimulation to the private building industry. It remains to be seen whether the lender role gradually assumed by the federal government as a means of stimulating state and local works projects will remain an important influence in the handling of state-local borrowing or whether this will gradually pass back into ordinary bond market channels. It would seem that the most that at the present time can be said with assurance about the net effect of the public works policies of the thirties is that they appear to have enabled a number of concerns to keep alive their operating organizations, and that the federal government's public works wage policies not only maintained at fixed levels the wage rates of the considerable number of workers engaged directly upon federally-financed projects but may also to some appreciable degree have held up the level of private wage rates in corresponding occupations.

The Unemployment Relief Programs

Definition of the scope of the measures which may be considered to have been undertaken for the sake of unemployment relief involves many hazy areas even after the public works programs have been excluded.⁸ It is assumed that there will be general agreement that "relief" can properly be taken to refer to the granting of money, or goods and services, to individuals on the basis of some sort of determination of the fact and the degree of their actual need for assistance. On the other hand, "relief" is also usually taken to connote the various and sundry unemployment programs to which the word relief became attached during the thirties. There is a sizable gap between these two uses of the term. The 1933-34 Civil Works program is usually and properly included among the unemployment relief programs even though possibly half of the CWA employees were persons who had registered at an employment office as being unemployed but who had not previously been on the relief rolls. If "relief" is taken to comprehend the entire activities of the Work Projects Administration, it automatically includes the 3 or 4 per cent of WPA employees not taken from relief rolls but employed because of the need for supervisory or specially skilled workers to facilitate project operations. It is ordinarily presumed that in the administration of relief all cases which remain on the rolls will be reinvestigated periodically, but the WPA program was undertaken with the avowed intention of minimizing the application of the means test once a worker initially had been certified as in need of relief. Re-

⁸ It will presumably be self-evident, in view of the subject matter of this paper, that the discussion is not intended to include consideration of the "public assistance" programs (old age assistance, aid to dependent children, and aid to the blind), for which federal aid became available through the 1935 Social Security Act. As a rough basis for comparison with the sums of money involved under the other programs discussed it may be interesting to note that the federal and state costs of the three assistance programs in 1939 totaled in the neighborhood of 600 million dollars.

investigations of the actual degree of need of WPA workers were therefore undertaken only at infrequent and irregular intervals. Similar anomalies might be cited at considerable length. The most important of them, however, arises from the lack of any line of demarcation, or of at best only a very fuzzy and blurred line, between relief to the unemployed and relief to all manner of other types of need for assistance or supplementary income.

The reasons for the lack of any clearly defined distinction between unemployment relief and relief generally can be made clear only by a hasty review of the evolution of relief policy during the first half of the thirties. The 1929 depression found the United States with the most archaic and least effective unemployment relief arrangements of any of the world's great industrial countries. Striking innovations had been made over several decades in the private development of social work, in the provision of special types of public assistance for particular categories of dependents (such as the insane, military veterans, victims of industrial accidents, the aged, and dependent children), and in the establishment of local or state departments of public welfare. Practically nothing had been done to provide orderly, certain, and equitable relief for able-bodied workers who became impoverished during periods of unemployment.

Relief to the unemployed was legally the responsibility and prerogative of local (city, town, or county) officials, except in the scattered communities in which local policy or local governmental inaction had shifted part or all of the responsibility to private social work agencies. Somewhat advanced policies and relatively high standards existed in a part of the communities in which the relief responsibility had thus been shifted or in which modernized public welfare departments had replaced antiquated forms of poor-relief organization. Elsewhere the unemployed in 1929 had as their principal recourse the uncertain, capricious, and often woefully meagre assistance dispensed by the local poor law officers. These officers for the most part were guided by their parochial interpretations of state poor laws embodying the spirit, and often the specific provisions, of relief policies fashioned to fit the conditions of colonial or frontier communities. Two centuries earlier, the proper governmental unit for relief purposes appeared, logically enough at that time, to be the unit smallest in size and closest to the citizen. Except for special provisions in some states to aid persons without a legal residence in a specific subunit, administrative and financial responsibility with respect to the relief of the unemployed remained with the same local entities in 1929.

Direct federal participation in the unemployment problem had hardly ever been suggested with any seriousness. Generally, the widespread popular assumption that in critical periods of unemployment unusual relief needs would be taken care of by temporary or permanent private agencies complicated efforts to overcome the organizational and psychological unpre-

paredness of the country for an emergency such as the one which followed 1929.

The throngs of relief applicants who appeared by the second and third winters of the depression strained the existing facilities to or beyond the breaking point. It was only rarely that local governments were equipped with officials or agencies able to cope effectively with the destitution produced by mass unemployment, and the very fact of their prompt recognition of the emergency tended to strain their financial resources all the more. It was much the same with the private agencies in the communities in which they had absorbed the responsibility for unemployment relief. Abandonment of the previously established channels for the distribution of aid began in the fall and winter of 1930. By the summer of 1932 the older public and private organizations, especially in the more populous areas, had with relatively few exceptions been subjected to outright displacement by emergency agencies or to a drastic overhauling and redefinition, ending with state intervention and increasing restrictions upon local autonomy.

These organizational shifts were in part merely a repetition of the experience of earlier depressions. Usually, however, the end of a depression had been followed by the return of relief functions to predepression officials and agencies. This time the intensity and duration of the depression shook not merely the relief organizations of the largest cities but overturned partially or completely the poor law and private agency structure of most smaller communities and of entire states. Inability to command sufficient financial resources was by no means the only factor. Administrative weaknesses and incompetence were often equally important. Many of the statutory poor law authorities were hardly seriously taken into account when communities became conscious of the need of aggressive action; often, furthermore, the statutory poor relief was held in such low esteem that its use to aid the depression unemployed was utterly unacceptable to public opinion.

Completely localized relief made its last stand in 1930-31, in the second winter of the depression. When in community after community the local poor relief machinery was unable to provide aid at any justifiable level of adequacy or even to cope administratively with the crowds of applicants, energy tended at first to be directed toward stop-gaps or toward elaborate circumventions such as the odd-job campaigns, apple-selling drives, and a variety of other attempts to find employment substitutes which would lessen the pressure upon the relief agencies. Few communities settled down to the development of effective and continuous relief organizations. Almost every force playing upon public opinion operated in the opposite direction. It was still being maintained widely that the depressor was almost over. Relief was therefore commonly subordinated to the stimulation of confidence. The more desperately driven cities improvised special emergency

organizations to take over the whole relief burden or some arbitrarily determined portion. The emergency basis of action involved organization and financing for the shortest possible duration, and a failure to define policies or to settle organizational problems for more than a few months at a time became one of the depression's principal characteristics.

The third depression winter in 1931-32 saw the development of an irresistible demand for new sources of both financial and administrative support. Relief allowances and even the acceptance of relief applications had been curtailed to the point at which further curtailment was beyond the bounds of ingenuity. A large proportion of the local governments were utterly unable to overcome the double impact of the extraordinary costs involved in trying to cope with the relief problem and of the effects of the depression upon regular sources of local finance. State and federal officials gradually recognized also that the vastness and complexity of the problem were outrunning the capacity for management of a very substantial number of communities. In the fall of 1931 the states of New York and New Jersey created state financed and state-wide emergency relief administrations, thereby breaking with the traditional local autonomy in matters of unemployment relief. Several of the other principal industrial states with tax or credit resources which could be tapped at the state level soon followed the patterns set by New York and New Jersey. The fiscal resources of most of these, like those of the local governments, were not, however, sufficiently elastic and by the spring of 1932 state officials were joining in a demand for help from the federal government with the local officials from states whose governments for one reason or another had not acted. Federal aid, on a modest scale, finally became available in July, 1932, through the appropriation in the Emergency Relief and Construction Act of 300 millions for "advances" to the states by the Reconstruction Finance Corporation for furnishing relief and work relief "to needy and distressed people and in relieving the hardship resulting from unemployment."⁹ Shortly before this first appropriation was exhausted, in May, 1933, the Federal Emergency Relief Administration was established and a further 500 millions appropriated.

It has been estimated that the expenditures more or less exclusively devoted to unemployment relief may very roughly have amounted to about 80 million dollars in 1929, perhaps 130 millions in 1930, about 300 millions in 1931, and in the neighborhood of 600 millions—including around 80 millions from the Reconstruction Finance Corporation in addition to state and local expenditures—in 1932.¹⁰ In 1933 the combined federal, state, and local costs of "general relief" and ancillary FERA programs, of the

⁹ Earlier in 1932 government-owned wheat and cotton, acquired under the federal farm relief program, had been turned over to the American Red Cross for distribution among needy persons at its discretion.

¹⁰ Henry J. Bitterman, *State and Federal Grants-in-Aid* (New York, 1938), pp. 153-154.

CWA, and of the Civilian Conservation Corps, but excluding all public works whether "emergency" or otherwise, rose to 1,200 millions, and in 1934 to over 2,500 millions. The total remained about the same in 1935 in spite of the initiation of the WPA program in the fall and the gradual expansion of rural rehabilitation or rural resettlement expenditures. An all-time high of more than 3,250 million dollars followed, however, in 1936 when the WPA program came into full operation and alone accounted for the expenditure of 2,200 millions. The next year brought an appreciable reduction and the total amounted to about 2,750 millions. Comparable calendar year figures for 1938 and 1939 are not yet obtainable but the aggregate for 1938 seems to have been about 2,500 millions, and for 1939 close to 3 billions. Data thus far available suggest that in the year of 1940 the expenditures which have here been considered as more or less of an unemployment relief character may well turn out to have fallen below 2 billion dollars for the first time since 1933.

For the five-year span of 1933-37 covered by a detailed and published analysis¹¹ the expenditures by the federal, state, and local governments for "general" relief, work programs primarily designed to employ relief labor (but excluding so far as possible both "emergency" and "regular" public works),¹² and for rehabilitation, etc., programs launched in 1934 and 1935 to aid rural families, amount to a total of at least 12,500 million dollars. When the estimates given above for 1938 and 1939, and the even more tentative estimates for the years 1930, 1931, and 1932, are added in, it seems that the aggregate for the ten years 1930-39 can hardly be less than at least 19 billions. Even this total does not include the 1,107 million dollars of benefits under the state unemployment compensation laws and the 15 millions of railroad unemployment insurance benefits which had been paid out by the end of the first half of 1940. Neither have there been included the costs of the various "surplus commodity" programs in operation since 1933; these, however, were undertaken essentially as a device for easing the agricultural surplus situation and came to play a significant role in the relief problem only after the termination of federal grants-in-aid threw the general relief burden back upon state and local finances, especially after the initiation of the food stamp plan in 1939.

The Lack of Clarity in Relief Policy

The persistence through the forepart of the thirties of the hope for an early end of the depression profoundly affected the entire course of un-

¹¹ Cf. Dorothy Fahs Beck, "Problems in the Compilation of Data on Total Relief and Work Program Expenditures," *Journal of the American Statistical Association*, June, 1938, pp. 353-362.

¹² It should perhaps be noted again that here, as elsewhere in this paper, there have also been excluded expenditures for old age assistance, aid to dependent children, and aid to the blind except to the extent to which cases appropriately falling within these groups happened to be absorbed within the "general" relief load in the years prior to the initiation of the Social Security program.

employment policy. Given the assumption that the depression was nearing its end, it followed that there seemed good reason to assume that the importance of the unemployment problem would also disappear soon, and, in that case, it seemed reasonable to assume that relief expenditures would likewise drop off to some more manageable level. In the face of these assumptions it was difficult to make a persuasive case for a careful planning and development of policies, organizational structures, and administrative practices. The immediate task of somehow getting through the month was in any case always so pressing that even the most forward-looking of those responsible for relief policies and financing had little time, energy, or inclination to look ahead further than the exigencies of the immediate "emergency" seemed to demand.

It happened unfortunately that all three of the hopeful assumptions long continued to be unfounded. The depression waxed and waned from time to time but its impacts had not disappeared even by the end of the decade. The progress of economic recovery did not produce a seemingly commensurate decline in unemployment, partly because the optimists had failed to make sufficient allowance for changes in the age distribution of the population, agricultural displacement, technological changes, and other current factors, partly perhaps because the accredited unemployment estimates did not prove sufficiently sensitive to the changes that were occurring. The assumption that relief expenditures would shrink rapidly overlooked the fact that the types of destitution which were being ameliorated by the "unemployment" relief programs were far from coterminous with the unemployment problem if this is considered in the traditionally accepted sense of the term.

The hope that all three assumptions would prove to be sound nevertheless did not die out. It persisted especially among the federal and state officials whose primary concern with general recovery measures, with social reforms, or with administrative management, was constantly being complicated and thwarted by the complex, costly, and vexatious problem of relief. The notion of settling down to relief programs calculated for two or three years ahead, or even for twelve months, was therefore most unpalatable. Many state relief appropriations were made for six, even for three, month periods, and until near the end of the decade the federal appropriations, though nominally for a full year, were customarily enacted with full knowledge that one or more deficiency appropriations would be required within the year unless recovery took on miraculous proportions. The sums federally appropriated were allotted among the states, month by month, from the summer of 1932 through the end of the FERA period, and sometimes—when federal appropriations ran out or when the Treasury in turn tried to apply the FERA's theory that monthly grants were conducive to economy—for shorter intervals. Only rarely did the states have certain

foreknowledge of the actual amounts which they were likely to receive. The supposition that this would make it certain that no more would be spent within a given time-period than might actually be essential, was only partially responsible. Federal officials themselves did not know for more than a few months ahead what the nature of the over-all relief policies, and the amounts of funds to be available, would be. If the federal officials were reluctant or unable to determine policy far beyond the immediate moment, it is hardly reasonable to expect that state and local officials would be able to do better. The amazing thing is that state and local relief operations did nevertheless maintain a substantial appearance of stability and consistency.

The repeated shifts in the objectives and content of the federal relief program complicated and contributed to the lack of advance fiscal commitments. High government officials, federal and state alike, shared the common public reaction of "not liking relief." Hence there was a continuous search for more attractive alternatives to be substituted for whatever happened to be the *status quo*, in the hope of either short-run or long-run economy in relief expenditures, or as a means of attaining what were considered to be more desirable or more extensive social advantages than the simple giving of relief to persons found eligible for relief. Disregarding the infinite variety of secondary or incidental modifications of policy, many of which, however, affected tens or hundreds of thousands of relief recipients, within two and a half years the following major shifts occurred:

March, 1933—Establishment of the Civilian Conservation Corps, primarily to create work for unemployed youths. The number of persons employed by the CCC at various times has ranged between 250,000 and 600,000; expenditures thus far because of the operation of the CCC are in excess of 2,500 million dollars.

May, 1933—Establishment of the Federal Emergency Relief Administration which replaced the Emergency Relief Division of the Reconstruction Finance Corporation and exercised control over the federal-state general relief program upon which numbers of cases or families ranging from 3,500,000 to 5,500,000 were dependent in various months during 1933, 1934, and 1935. During its existence the FERA granted to the states almost 3 billions for use for either direct relief or work relief, or for various specialized work or other programs such as that for the relief of transients.

July, 1933—Establishment of the Public Works Administration which, though not directly concerned with the programs discussed in this section, for a time seemed likely to become the federal government's sole or principal work program agency.

October, 1933—Organization of the Federal Surplus Relief Corporation (later the Federal Surplus Commodities Corporation), to distribute among relief clients the usable foodstuffs acquired under the agricultural surplus control program.

November, 1933—Initiation of the Civil Works program as a means of creating emergency employment more rapidly than under the Public Works Administration's program. The Civil Works Administration was largely identical in personnel with the federal and state relief administrations, but functioned under federal procedures and controls. About half of the CWA workers were taken from the existing relief rolls and the other half from among unemployed persons not receiving relief. CWA employment reached a maximum in January, 1934, of 4,300,000 but thereupon slowly diminished until the program terminated about the end of March. CWA expenditures totaled about 950 million dollars.

February, 1934—College student aid program initiated.

February, 1934—Presidential announcement that substantial modifications of relief policy would follow upon the liquidation of the CWA.

April, 1934—Initiation of the Federal Emergency Relief Administration's "emergency work relief program" as a partial replacement of CWA and as a means for expanding and improving the types of state and local work relief in existence prior to CWA.

April, 1934—Initiation of the Federal Emergency Relief Administration's rural rehabilitation program.

June, 1934—Participation of relief agencies in the handling and processing of cattle shipped from the northwestern drought areas.

Autumn, 1934—Active formulation by both FERA and PWA officials of proposals for a new and greatly expanded emergency employment program.

January, 1935—Introduction of legislation for the creation of a new works program and beginning of a period of the greatest uncertainty over the future relationship of the federal government to the direct relief activities and other programs of the state and local relief administrations.

April, 1935—Enactment of the Emergency Relief Appropriation Act.

May, 1935—Creation of the Works Progress Administration, the Resettlement Administration, and other agencies to administer various phases of the new works program.

June, 1935—Creation of the National Youth Administration to take over the student aid program.

July, 1935—Operation of the first WPA projects.

September, 1935—Termination of relief applications under the federal transient relief program.

Autumn, 1935—Gradual termination of federal grants-in-aid to the states for unemployment or general relief.

Relief administration and policy settled down somewhat from 1936 on so far as the federal government was concerned, though major shifts in specific policies of the WPA took place at least two or three times a year and the probable actual volume of WPA employment was seldom predicable far enough in advance to ease the problems encountered by the states and localities in taking over that part of the relief load not absorbed by the WPA. The termination of federal grants-in-aid indeed tended to multiply greatly the frequency of "crises" in state or local relief.¹³

An appraisal of the relative social and economic desirability of each of these shifts would be possible only through a detailed presentation of the intentions, facts, and probable repercussions involved in each instance. The greatest of the shifts, that whereby the federal government substituted the financing and administration of the 1935 works program for the policies in effect in 1933-35, will be examined somewhat in the next section of this paper. It may be enough here to suggest merely that few of the changes would be found to lack in themselves some substantial degree of justification, that the changes when made usually seemed to have the full support of public opinion for the time being at least, and that the "emergency" psychology which had come to dominate relief policy in turn easily overruled strictly relief considerations if a proposed course of action seemed to promise some degree of progress toward general amelioration or recovery. It is probable, furthermore, that most persons upon close study of the

¹³ Nearly a score of critical turns or major reversals in the availability of relief at all, or in the size of relief allowances, or in the definition of relief eligibility, can be identified in, for example, tracing the course of relief in Chicago from the fall of 1935 through the spring of 1940, and numerous other large cities experienced from half a dozen to a dozen similar critical junctures within that time.

realities underlying the relief programs would agree that the attempts to raise standards above those prevailing in 1932 and 1933 were on the whole entirely commendable. It must be added, however, that a case can be made for the contention that the leveling-up process did not occur evenly and that, for instance, the improvement in income status of the WPA workers was obtained partly at the cost of leaving many of the persons dependent upon state or local relief worse off than they would have been in 1933 and 1934. One group of necessitous persons, those aided through the 1933-35 transient relief program, was in the end left largely with no recourse to relief at all.

Regardless of the justification for the policy changes, their frequency served to undermine administrative stability, all the way from the points at which relief applicants were first examined up to the central offices of the federal and state agencies. In the tremendous strains created it often seemed as though the presumably primary task of giving relief was being subordinated to an infinite variety of special ventures ranging from experiments in continuation classes to efforts to stimulate the native arts and to domesticate in quiet New England farms range steers from the Dakota prairies. If under these varied pressures less control was exercised at times over the scale of expenditures than might otherwise have been the case—and, it should be added, there are no specific proofs of this—it would hardly be surprising.

More significant in the long run was the probable reaction upon the recipients of relief. The shock of losing a seemingly steady job and the subsequent humiliation of submitting to a means test were likely to be followed by a bewildering number of shifts in eligibility, in the programs from which aid came, and in the amount and certainty of the aid. It is at least conceivable that these often probably incomprehensible uncertainties in the policies of "the government" may have constituted a greater danger to morale and a greater incentive toward finding ways of outwitting the officials, than the simple receiving of relief could ever have in itself involved.

These observations have been developed at some length in order to make it understandable why a basic clarification of objectives never seemed to materialize. When the depression broke upon the unprepared communities, there was no time to make neat distinctions between the treatment of unemployed wage earners and that of persons in need because of other types of social or economic problems. A rough segregation was effected in some places by setting up totally new relief programs for the unemployed, but even in these there was no time to inquire too closely into the nature of a given individual's former attachment to the labor market or to decide whether given policies were calculated to preserve and restore this attachment. The relief agencies did the best job they could of spreading out funds which never quite seemed to reach, regardless of whether they were deal-

ing with workers usually steadily employed, with cases in which steady work did not prove to yield sufficient income, with farm families, with families which had left the farm in the hope of finding assistance in the city, with wanderers, or with instances of family disorganization.

It was quite natural, therefore, that the 1932 relief appropriation placed first "relief and work relief" for "needy and distressed people" and referred only subsequently to "relieving the hardship resulting from unemployment." The Federal Emergency Relief Act of 1933 used even broader language when it began by stating:

That the Congress hereby declares that the present economic depression has created a serious emergency, due to widespread unemployment and increasing inadequacy of state and local relief funds, resulting in the existing or threatened deprivation of a considerable number of families and individuals of the necessities of life, and making it imperative that the federal government cooperate more efficiently with the several states . . . in furnishing relief to their needy and distressed people.

Though another section of the Act spoke more specifically of "relieving the hardship and suffering caused by unemployment" in actual practice the broader language tended to govern. Furthermore, with the perfection and extension of relief organization previously ignored areas of need were uncovered and became too visible to be rigorously excluded from the operation of the relief programs. An attempt to do so would most certainly have been condemned as ruthless, regardless of the fact that destitution had resulted in these areas in the main not from current unemployment but from the depressed state of agriculture in the twenties, from drought, or from industrial shifts which had decades before produced stranded communities and areas. Similar extensions of the scope of relief occurred on an individual or group basis in metropolitan communities whose social agencies had previously not perfected a city-wide organization. Finally, as particular states or localities found themselves more and more hard pressed financially, the general relief load inevitably picked up also for a time a certain proportion of aged, dependent children, and blind cases.

There is no intention here of attempting to weigh the relative need for relief of these various groups. All that is intended is a suggestion that the formulation and administration of policy might have benefited from a clearer perception of the degree to which "unemployment relief" was becoming something only partially related to unemployment in its strict economic sense. In defense of the public officials who acquired this perception slowly, when at all, it is well to remember that congressional discussions of relief policy gave little indication of a greater discrimination, and that the number of members of Congress who showed initiative or willingness in grappling for an understanding of the whole matter was about as large as the number of economists who became actively interested and concerned.

The ease with which these things can now be said should not therefore blind one to the great difficulty which even the most conscientious and re-

flective of the persons dealing with the relief problem experiences in establishing, amid the overwhelming responsibilities which they were carrying, tenable distinctions of policy between identifiable groups within the relief population. During more than two years the number of individuals dependent upon one or another of the emergency relief programs was seldom less than 20,000,000 in any one month. Under the urgency and haste of administrative operations and the magnitude of the task, it was not, or at least seemed not, easy to acquire the data upon which considered judgments could be founded. Not only was knowledge of the composition of the relief rolls usually imperfect or scant, but the development of labor market research up to the middle thirties was so fragmentary that detailed knowledge about the relief recipients would not have been of much value in analyzing many of the repercussions of relief policy upon special occupational or industrial groups.

Some rudimentary attempts to adjust relief policies to special classifications of relief cases were made. The 1933-35 program for transient relief constituted one instance. A long series of improvisations sought to develop special techniques and work programs to ameliorate what was considered to be the particularly difficult situation of "professional and technical" or of white collar groups workers compelled to apply for relief. In this case, however, a part of the effort to modify the over-all policies resulted in certain localities in relaxations of the means test to an extent which ultimately tended to alienate public support. Gradual perception by 1934 that some of the relief concepts developed in urban industrial communities were not well adapted to the situation in agricultural communities brought about the attempt to evolve "rehabilitation" and resettlement schemes for a portion of the rural relief cases. The actual handling of this attempt was, however, often confused by failures to distinguish clearly enough between farm operators and farm laborers, and, even more, between these groups and the "rural nonfarm" population in the villages or in the vicinity of industrial centers which actually constituted a high proportion of what at first was taken as the agricultural component of the relief load. Furthermore, means were not found with which to control the staggeringly high proportion of the rural population applying for relief in some of the western states where the droughts of 1934 and other years were especially serious and when it seemed particularly hard to prevent relief programs from coming to be viewed as merely one more of the several forms of government aid to agriculture which had been found acceptable during the preceding decade or two. The other principal attempt at differentiation involved the attempt to segregate "employable" and "unemployable" cases mentioned in the next section because of its bearing upon work relief policy.

With the possible exception of rural rehabilitation and resettlement, all of these efforts to develop classified programs or policies continued, how-

ever, to be heavily colored by the confusion between "general" or "emergency" relief, on the one hand, and the problem of unemployment, on the other. "Unemployment" had come to be stretched very early in the depression to cover not only the loss of jobs but almost everything which formerly might have been labeled as "poverty" or "destitution." This merging of concepts made it easier during the depth of the depression to get support for appropriations sufficient to ameliorate the destitution which the public generally seemed to regard within the proper scope of relief. To the extent, however, that the problem came to be accepted as a unit, the difficulty of getting special attention for its parts was not only increased but when in later years re-employment was obviously developing, the identification of relief with unemployment was so deep-rooted that it became difficult to hold public and legislative support for continued extension of the relief measures.

The Work Relief and Emergency Employment Programs

Discussion of all of the considerations that must enter into a careful evaluation of the merits and disadvantages of work relief as a relief or unemployment relief device would require an inordinate extension of the length of this paper. The preference of the present federal administration and probably of the general public for work relief continues in any case to seem unshakable. It is a cardinal principle of American psychology that work is under practically all circumstances strongly preferable to idleness. Attachment of the word "work" to particular programs has therefore usually served to prejudice the matter, and it is difficult to awaken any substantial interest in the rather subtle factors that require examination in an appraisal of the nature and effects of one particular work policy as against another.

That much depends upon the way in which work is given, to whom it is given, the standards of supervision and performance maintained, the comparability of the work to more normal types of pecuniary unemployment, and the actual utility of the work performed, will seem obvious but these elements of the problem have seldom obtained thorough debate when federal, state, or local work relief programs were being initiated or modified. Much more prominent in the discussion of proposals or actual performances has been the supposed size or monetary value of physical accomplishments. It tends to be assumed that work relief succeeds in getting out of persons who would otherwise be comfortably idle at the public cost something by way of a tangible return from expenditures which would have to be made anyway and that, whatever the actual accomplishment, it is all net gain. That this pleasing assumption is subject to a number of qualifications (and that in many instances the "net gain" may be small or illusory) has been found by the economists who have given the problem careful attention.

The argument that the performance of some sort or semblance of work is essential to prevent the deterioration of morale presents many more difficulties. The few objective studies which have been made of relief and morale all seem at first to support the case for work relief. In part this may be nothing more than a reflection of the fact that, by and large, the work programs have tended to be more stably financed and to have involved less jeopardy than direct relief of seemingly capricious variations in relief allowances and status. One must of course admit that the wage earner who leaves his home in the morning to go to a job, no matter what sort of a job, has definite psychological advantages over the man who finds himself compelled to explain or to justify to members of his family and his neighbors the fact that he is not currently engaged in any particular occupation.

It seems preferable, however, not to attempt here the necessarily very detailed treatment which a careful and full exploration of the work relief controversies would require, but to be content instead with merely pointing out certain elements of the problem which have had an important bearing upon the general thinking about unemployment in the course of the depression.

One set of considerations which cannot be ignored is that once it is decided that work shall be required of relief recipients, it becomes difficult to exclude seemingly deserving marginal cases to whom relief would readily be denied if no return were involved, but whose willingness to perform work creates a *prima facie* case for leniency. The available records of the work relief programs sponsored locally early in the depression contain many evidences that a relaxation of relief eligibility was not an uncommon accompaniment of work relief programs. There were indications, though these were never documented, that similar reasoning may at least in some degree have increased the number of relief recipients during the operation of the Federal Emergency Relief Administration's 1934-35 emergency work relief program. Observers of the relief situation in some of the western farming states found then and earlier that it was difficult to get local officials to see why the "budgetary deficiency" principle and the other accompaniments of the means test should be applied as rigorously to the farmer who was ready to put in a week's hard work on the roads as to the odd-job man or migratory worker who asked for relief in the towns and whose physical or other limitations made it unlikely that the relief given would be substantially repaid.

A further factor experienced especially from 1934 on was that the effort to satisfy public opinion by substituting substantial construction projects for what had been berated as "leaf-raking" activities necessarily involved types of skills which might not be found on the relief rolls at the precise time when they were most needed. A variety of persons without relief status, most of them drawn from the building trades, had therefore to be employed

to round out the crews of particular projects. That this was by no means a negligible factor may be indicated by the fact that employees without relief status and not engaged in administrative work received wage payments aggregating 100 million dollars during the eighteen months or so of the FERA's 1934-35 work program. Comparable figures for the similar expenditures under the WPA are not currently available but must have been very much larger, and it is this portion of the WPA employment which has been especially responsible for contentions of improper competition with private employment.

One of the major objectives set when the works program of the last half of the decade was formulated was that work assignments would be governed carefully—in contrast with the hasty and rather indiscriminating assignment of workers under the CWA, for instance—by an intention of preserving or enhancing prior occupational skills and aptitudes. This concept of the WPA as a combined relief and training program had to be abandoned without being tried. It would necessarily have required the development and operation of projects nicely adjusted to both a great variety of previous industrial or other employment and to great uncertainties about the length of time for which any one individual worker might remain out of private employment. While conscientious efforts were made to improve the quality and range of projects, in the end impatience over the slowness with which the program was getting under way and the inherent difficulties of effectively operating a sufficiently wide range of projects made it necessary to find projects first and then to assign as best as possible those workers who were available. This is to some extent shown by the fact that road and street projects have at all times accounted for 40 per cent or more of total WPA employment.

The assumption that a reasonably clear line could be drawn between "employable" and "unemployable" relief cases constituted another basic element in the reasoning underlying the 1935 federal works policy. The attempt to draw this distinction arose partially out of the search of federal relief officials for some tenable formula by which a portion of the relief costs in the Southern states, which had since 1932 been defrayed almost entirely by the federal government, could be forced back upon the states and localities. It was thought that the so-called "unemployables" could be assumed to represent roughly the types of welfare cases which were being supported out of nonfederal funds in other states and which in any case were expected to be partly absorbed by the federal-state public assistance programs under the Social Security Act. This supposed distinction was in 1935 taken as the dividing line between federal and state or local unemployment relief responsibilities. It was stated that the federal works program would provide employment for all the "employable" relief cases (the question whether this included all "employables" within a single house-

hold or only the principal breadwinner or some substitute was not entirely clarified) and the states or localities would be expected to finance the costs of relief to "unemployables." The impossibility of arbitrarily determining individual "employability" or "unemployability" except in terms of specific employment openings appears not to have been considered carefully. To the states and localities it was more important, however, that even the large amounts appropriated for the federal works program proved insufficient to absorb all unemployed able-bodied workers so that substantial numbers remained charges upon state or local relief funds. In part this would have occurred regardless of the size of the federal work relief appropriations inasmuch as it would have been impossible to manage work projects flexibly enough to tide over those "employables" whose need for relief is limited to a few weeks, or to cover by work relief destitution resulting from the illness of the breadwinner.

Whether the provision of relief on a means test basis, the achievement of satisfactory work results, or the provision generally of emergency employment to persons unable to find work (or to find suitable work) should be the principal objective of work relief has presented a dilemma which can hardly be said to have been faced clearly by the stated objectives or the actual practices of the work relief programs during the thirties. Usually an attempt was made to attain in some degree at least two if not all three of the objectives, and perhaps as well a fourth one of stimulating general economic recovery. In the face of conflicting public pressures and of varying opinions about the steps most likely to bring about re-employment, the works programs passed through a succession of modifications or vacillations in policy concerning eligibility for assignment to work, the frequency and nature of the subsequent applications of means test principles, the compensation offered and the hours of work, and the types of projects permissible. It is at least an interesting speculative problem whether both the giving of relief and the performance of work might not have gone forward more effectively had a clear-cut separation of relief and of emergency employment been established. A first consideration under these circumstances would have been the assurance of relief under suitable conditions to those persons actually falling within the groups for whom relief was intended. Emergency employment could thereupon have been offered, subject to whatever wage and working conditions sound social and economic policy might have dictated, to as many of the actual number of the unemployed as a combined consideration of the magnitude of the unemployment problem and the necessary limits of federal fiscal policy would at any given time permit. It may of course be said that this was what the 1935 works program sought to do. It, however, hardly met the first of the considerations here stipulated and, largely for that reason, was forced into innumerable halfway meas-

ures which prevented it from becoming either a clear-cut program for emergency employment or an unequivocal relief program.¹⁴

The Need for a Clarification of Basic Concepts

The preceding pages have concentrated attention upon the factors which contributed to the lack of a coherent and understandable unemployment policy during the thirties. It is unfortunately not possible at this late point to treat similarly other important aspects of the successive policies adopted. Of these the interplay between relief—especially the work program wage policies—and the labor market generally, including the ways in which the administration of relief created incentives or deterrents to re-employment, especially merits thorough consideration. All that can be noted here, however, is that—aside from certain special problems in the building trades field—definitely perceptible repercussions upon private employment were concentrated within agricultural employment and various forms of casual or intermittent work such as domestic service and odd jobs. The effect of the expenditure of 19 or more billions of dollars upon fiscal policies and upon the attitudes and fears of private investors is a matter falling essentially within a review of the total financial history of the decade. Perhaps the most striking and disturbing impact of the relief costs was their unpredictability from year to year, even from month to month.

Another gap in the receding presentation which cannot be covered adequately at this point concerns the role of the unemployment compensation program. This, however, will be of far greater significance in the forties than in the thirties, having reached full operation only virtually at the end of the decade. It may be sufficient for present purposes to point out that the unemployment compensation statutes represented the first, or at least the first permanent, step of the past decade to treat the unemployment problem in a way geared to the functioning the nation's economy as a whole, instead of in terms which assumed the establishment of an economy of the unemployed outside of, or in competition with, the rest of the economy.

The almost constant failure of the other unemployment problems to take into account the actual phenomena of the labor market strikes one forcefully in looking back over the past ten years. The extent to which individual policy-makers may have been responsible for this is of transitory interest. More important is the fact that the gaps between relief policies and the effective functioning of the labor market largely represented a lack of current and adequate labor market information. Officials could not be wiser

¹⁴ A fuller account of the dilemmas involved in the relation of work relief to the relief and unemployment problems is given in the chapter on "Public Relief," prepared by Paul T. Homan, in the Brookings Institution's *Government and Economic Life* (1940), Vol. II, pp. 1161-1207.

than their times, and the time was one in which even at the end of the decade, to quote a memorandum summarizing the discussion of the Social Science Research Council's labor market research conference last winter:

Our present knowledge of the labor market has . . . become sufficient to shake our confidence in the concepts which have been accepted in the past, but it is not yet sufficient to yield a clear picture of the adjustments which occur between labor supply and demand. We know enough to be aware that the simple contrasts traditionally used—such as those between employment and unemployment, the gainfully employed and the not gainfully employed, seasonal employment and non-seasonal employment, casual and steady work, the employables and the unemployables—do not possess the significance that they may once seemed to have. But, both more valid concepts and the evidence upon which new concepts can be built remain only partially and inadequately explored.

Significant advances in knowledge are now being made. The Work Projects Administration itself has contributed much in the last several years through the studies of its National Research Project and the sample studies of unemployment of its Division of Research. Unemployment compensation, employment office, and old age insurance operations are providing a basic body of data on points which previously could not be more than matters of conjecture. A number of able private investigators have turned their attention to the dynamics of labor supply and demand. The findings of research are, however, only slowly making an impact upon the depression's greatest misapprehensions—that the problems of relief and unemployment are substantially identical, and that the unemployment problem as thus viewed constitutes one huge monolithic entity.

The consequences of these misapprehensions extend far beyond scientific interest alone. They provide the principal recurrent rationale for sweeping "remedies," for the marshalling of new "white rabbits," and for much of the content of the large-spending philosophy. As long as unemployment is taken as a great single whole, the view that it has become a permanent characteristic upon the economy easily follows, together with a tendency to magnify its absolute volume. Among nonspecialists, even those who have not totally accepted the philosophy of despair, the belief that unemployment continues to range somewhere between 8 and 10 millions is still usual. These large figures are still bandied about after the more credible estimates have fallen to from 6 to 8 millions, and evidence is accumulating to suggest that an estimate in the neighborhood of 4 millions as of the middle of the fall might well have been more realistic. What the further effects of the defense program may be as its scale of operations expands can only be conjectured as yet, but it appears that practically all of the stock assumptions of the last few years concerning the volume and permanence of unemployment, the extent to which a "hard-core" has developed among the unemployed, and the nature and extent of the labor supply generally, may have to be completely recast.

UNEMPLOYMENT: ANALYSIS OF FACTORS

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I

The primary purpose of this paper is to investigate the problem of whether and to what degree it is possible clearly to discern, fully to enumerate, and quantitatively to evaluate the factors which have determined unemployment in America during the last decade and those which are most likely to determine it in the future. It is obvious that this is a task of no small degree; indeed, it might well be asked whether this problem, in all its phases, can be tackled at all, considering the present state of our knowledge. The two major requirements would be first the availability of factual information, which is sufficiently wide and accurate and which covers items of vital importance for the understanding of the problem in its broadest aspects; second, the availability of adequate analytical tools for the analysis of an especially complicated dynamic process of unique historical properties, so that a discussion of the matter may be undertaken with a fair amount of hope that concrete statements rather than empty generalities are possible. I can hardly hope to overcome the probable accusation that I am speaking, throughout this paper, in more general terms than would be desirable from many points of view; but I venture to say, in defense, that demands for explicit analysis and even detailed forecasts are themselves subject to severest criticism and that only few of them can be admitted as legitimate. The others, clearly, are of no scientific interest.

Indeed, one may go further and ask whether the task of projecting into the future the insufficiently known factors which determine American unemployment is at all a scientific one in the strict sense. A physicist asked to construct a *perpetuum mobile* would turn down such an invitation for the obvious reason that it cannot be done on principle; if asked to build a machine which would permit the throwing of a projectile to the moon, he would probably answer that as yet such a machine cannot be constructed and that there are more significant things to be done in his science. Economists, however, seem to stay at the state of alchemists in trying to reach for achievements which the condition of their science excludes for a long time to come, instead of working hard in steadily developing their science which is still in its very infancy. This process can only be furthered by patient and persistent questioning, by insistence on ever improved and more established facts, on strict logical reasoning, and on concepts properly defined and consistently used. These rather obvious postulates are not always observed in large parts of economic literature, and most certainly it would be unforgivable if I were not to make every effort to make unmistakably

clear where in the following discussion the firm ground of scientific thought is left for the sake of bolder speculation.

The fact that it is the curse of unemployment which stands in the center of these debates makes one realize with special misgivings the inadequacy of our science. Insufficient knowledge, incomplete data, mistaken appraisals, and unwarranted deductions lead ever so easily to policies which, though seemingly scientific, may not only contribute hopelessly to confuse but also to aggravate the very conditions they set out to remedy and thus upset or destroy the economic system which compels so many of its members to forego income under circumstances of enforced idleness and the accompanying feeling of humiliation. It is no doubt this human element which makes economists give way so easily to popular demands that "something positive" should be said and proposed, in order that this disease of the economic system be remedied. The statement that very little of a truly scientific nature can be said about a given problem seems to many people to be less bearable than that an uncautious and unwarranted answer be made. Naturally, at a convention of the American Economic Association this attitude can hardly play a part, but it is one which has to be borne in mind because it still determines the line of work of many a writer on economic problems.

Having thus briefly indicated what my attitude in regard to the topic on hand has to be, I should like to say that it is quite reasonable to ask an economist to state his general opinions and beliefs regarding the likelihood of future unemployment in this country. It would then clearly be understood that they could not be strictly scientific utterances but rather ones in which scientific elements are blended with mere guesses concerning factors which in all likelihood will be extremely important, perhaps even decisive, and about which sufficient knowledge is not possible. Obviously the crucial factor in the situation is the war. No one can tell whether and when the United States will enter the present conflict, how long it will last, or to which side the scales will tip, and yet on all these factors American employment will depend more than on any other single factor in the near and more distant future. And even "war" can be carried out in dozens of different forms, each one having far-reaching and different types of repercussions upon economic life in general and upon the volume of employment especially. Since it would be idle speculation to attempt to go into details in these respects, the only alternative is to trace the most fundamental aspects of the problem, thereby gaining in generality and losing in concreteness.

Even so, when I look back upon the time which I have devoted to mapping out what I thought I could say about the problem, I see that in these few months so many new and important elements have appeared that a treatment of an earlier stage would now already seem quite out of date.

It is only reasonable to assume that the same will be true in a none too distant future of the present treatment, assuming, of course, that the basic arguments are correct at the time of presentation. This is a very forceful proof of the fact that at each moment of time the forces then active are known only to a very limited extent. This would hold true even if our statistical and other information were much superior to what they really are; they could never comprise all those essentials which time alone gradually uncovers. A discussion of any economic problem which is limited to a definite area and which covers only changes over a short period of time can be sufficiently specific, but the longer the time to be considered, the more numerous become the factors, seemingly quite outside the picture, which have to be included. The increasing length of time requires inclusion of more and more factors because the economic processes become in ever growing measure more elastic, i.e., susceptible to new influences and to changes not to be expected, and frequently even impossible, in the shorter run. The problem as to how American unemployment is likely to develop during the future is obviously itself so vast, and the time factor so powerful, that it would be quite inappropriate to demand that a very general and inclusive treatment be avoided.

On the contrary, it is necessary to start with the fact that unemployment is only an aspect of a much wider and much more complex phenomenon which must be the real object of study whenever a comprehensive picture is to be drawn. Even so, we are more or less forced to leave out of account all those frequently highly significant factors with which the economist cannot cope, such as, for example, the basic political and, possibly in the near future, also military events.

Another real difficulty is presented by the fact that even today, perhaps increasingly so under the growing influence of trade unions, economists often hesitate to speak of wages simply as prices which perform the same functions as prices do anywhere else in the economic system; namely, to determine the supply and demand, in this case, of labor. This does not exclude the possibility that the labor market has more peculiarities of its own than have other markets as, for instance, the stock exchange. Economic analysis has made some efforts to take these peculiarities into account, and one is reminded here of the backward-sloping supply curve for labor, of the higher degrees of friction prevailing even over a longer period than elsewhere, of monopolistic elements, of legislative regulation of minimum wages and maximum hours, etc. There is no reason why all such factors should not be duly considered, nor why the labor market should not be studied with the same cool detachment which is required in any other economic investigation. It should be unnecessary to point this out but there is evidence that this reminder is hardly ever out of place.

The task of this paper will consequently be to view the conditions of

unemployment in the United States in its broadest aspects. For a more intensive examination it would be necessary if possible to enumerate all the variables that enter into the problem, to isolate them, determine their quantitative significance, and to solve the riddle of their interdependence. It is out of the question to do all this for reasons already stated and we must consequently content ourselves with something much more modest. Hence, I propose to discuss briefly five major elements in the problem and to investigate their bearing singly, and in conjunction, upon the volume of employment and the accompanying size of the national income. It will be more revealing if we examine the problem from the positive aspects rather than from the negative one of unemployment. The reason for this is twofold: first, the volume of unemployment is only partially conditioned by previous variation in the volume of employment, because part of it is due to factors at least temporarily outside the strict limits of economics proper, such as population increase, shift in age distribution, military service, technological progress, etc.; second, the apparatus of modern theory is more suitable to an analysis in positive terms. By this I mean that the relationships between unemployment and income have to be studied first in general terms and secondly in respect to the distribution of the national income. It is appropriate to state that the evaluation of past events and future prospects depends very largely upon the position of whether one prefers a larger national income at the price of some unemployment to a smaller national income with no unemployment (provided that a still larger income than the first, without unemployment, cannot be had). It is obvious that out of the larger income produced by a smaller number of men, one also has to feed the unemployed, and, as a rule, the problem of effecting the transfer of income is so difficult that it may not be possible to maintain (not to mention to increase) the total income. In such a case it would seem to be better procedure to let the system itself provide for the distribution of whatever it can produce and merely to see that the volume of employment is not impaired, though the total income may be far from a discernible maximum. As will be seen later, these questions are not idly put, since the present transformation of the American economy, due to armament, leads to a rise in employment accompanied by a much slower rise, and at a later stage even a possible decline, in real income.

The main points about which I propose to center the discussion are as follows: the role of wages during economic fluctuations, the restricting influences of monopoly, the decline of investment and its bearing upon the volume of employment, the shift to a war economy, and finally the transition of international trade under the impact of war. Naturally, this selection is somewhat arbitrary, but it is not difficult to see that most of the innumerable other factors can be subsumed under one of these headings. In dealing with a subject as vast as this one, this difficulty of how to strike a good balance is always encountered and never properly overcome.

II

Before entering upon a discussion of the main five points referred to above, it is necessary to indicate the quantitative issues involved. Since almost all economic phenomena and interrelationships are of a quantitative kind, it is obvious that the determination of the underlying quantities must play a major part in every argument. Here, however, we meet innumerable difficulties, some of which are peculiar to the situation in the United States, even though American statistics are as a rule far more ample and more reliable than those of almost any other country. Mr. Webbink's paper brings out clearly the numerous pitfalls in the field of unemployment which we have to take into account but which we cannot avoid if we trust the various current interpretations of the present position of the unemployment curve. The better statistics of employment tell only part of the story and do not cover a large enough field to be very useful. In particular, we are hardly able to separate these figures conclusively into their two significant components: the cyclical and the institutional or trend phenomena. We are all aware that very profound "structural" or institutional changes have occurred during the last ten to twelve years, especially due to the growing power of organized labor, but we are not in a position to attach quantitative significance to them. Therefore, any discussion pro or contra will have only slight statistical foundations. This is a highly undesirable condition which should be remedied in the future.

The lack of even remotely adequate statistical information throws us back upon theoretical analysis, and it is to be hoped that we will be better served in this field. Since theory depends upon the knowledge of facts, however, the trouble is in making the general conclusions fit our concrete case, even when the conclusiveness of the deductions are well assured. The latter fact depends not only upon the strictness of thought but also upon the original assumptions involved, which evidently have to be based upon facts, too. How, in the face of this statistical situation, they can be established, is an open question. They are, rather, derived from those of other theories; we shall hope that they in turn rest upon firmer ground.

More specifically, the question arises whether the separation of trend, cyclical, and random fluctuations in unemployment is in harmony with experience. A separation of these factors is nothing but a projection over the last ten years of regularities observed during a much longer previous period of time. The statistical method, therefore, already to some extent postulates the facts it is supposed to reveal, and it is usually only after a further lapse of time that relevant factors can be shown. This particular situation seems to prevail at present in the case of American unemployment where we are definitely not able to indicate the volume of "structural" unemployment. This is a very serious matter, as will be seen in a moment, when the question is raised as to whether the relation between wages and

employment in this country must be explained principally with the aid offered by business cycle investigations. If these cover only a comparatively narrow range, then the remainder of the issue can only be subjected to static wage theory with its limited powers.

III

In the examination of the above-named five factors basic for each discussion about unemployment in the United States, it is appropriate to begin with the most generally important one; namely, the relationship between the wage-level and the volume of unemployment. Again, we are primarily concerned with the cycle but have to admit that the entire situation is partly determined by that large amount of labor supply that has added to the total of those employable. Let us abstract from these elements for a time. The period of the past few years has, unlike any other, witnessed the wide acceptance of the doctrine that a high wage level—whatever that means in particular—is conducive to the maintenance of a higher level of "general business activity" than could be secured by downward adjustments of wages during a time of sustained unemployment. Behind this lies the entire ideology—no other word is appropriate here—of purchasing power that has to be created and safeguarded by almost any combination of expansive credit policy and fixation of minimum prices and "just" wages. The purchasing-power argument, which is an offspring—some would say an illegitimate one—of the purely monetary theory of the business cycle, which had shown up pretty badly during recent years, is of the vaguest kind and represents one of the worst examples of inconclusive reasoning in economics. It uses extremely oversimplified concepts, so inclusive that they are stripped of almost any applicability if one should wish to interpret, say, the American labor market for any given period in the dim light of this theory itself.

In a slightly more refined form the same argument reappears in the writings of some very recent authors who have at least made an effort—usually a very artificial one—of incorporating it into a more systematic treatment of wages. I am, of course, referring to the assertion that stability of wages is essential to a stability of the economic system. If this were found to be true and if the idea of "stabilization," which has already determined much of American economic policy, should still be the major objective, then naturally we would not only have little to do with the employment situation but could also sit back contentedly and watch the growing wage rigidities with satisfaction. The alleged importance of a stable wage level is not new. Some fifteen years ago it was discussed at length by Allyn Young at Harvard who then was anxious to determine whether a stable wage level might not serve as a pivot around which an economic system could fluctuate with a minimum of disturbance, especially under conditions of wide disparities of international price levels and fluctuating foreign

exchange rates. It is understandable that any such idea can very rapidly become a leading principle of policy because it will find the all too eager support of those who think they can—even as a group—profit by it and, by doing so, contribute to the benefit of the entire nation. Everything seems just as wonderfully in order as it was in those past days when a maximum of entrepreneurial profits allegedly secured beneficial results for the common good.

However, these generalities will not do. It is necessary to ask whether we are presented with a theory which really establishes important relations between facts or operates merely with loosely connected arguments of a different nature. The only help we can expect must come from two sources: from business cycle theory and from an examination of the applicability of the terms in which these views are presented. Starting with the latter, one finds again the unhampered and uncritical use of such a term as "the general wage level" which parallels in clumsiness the ominous concept of a "general" price level. How it is at all possible sensibly to speak of "a" general level of wages in the United States is difficult to see, especially if one bears in mind the multitude of industries with the most widely varying setup regarding use of capital, location, production technique, durability or non-durability of product, etc. The frequent use of this term is still harder to understand when one remembers the general satisfaction with which the indiscriminate use of the general price level concept was abolished. Economics would really be quite a simple science if it were at all possible to speak about these vastly complex and multiple relationships in such inclusive terms without giving up anything essential. One should only once take the trouble of looking into, say, physics, in order to appreciate this condition.

Even in terms of a general wage level the treatment of wages belongs in the field of those topics dealt with quite unsatisfactorily in business cycle theory. This is largely due to the fact that business cycle research has lately concentrated so much on the monetary factors that the simpler, but in many cases more basic, cost-price-profit relationships have been almost lost sight of. And where wage movements were examined it was principally with the intention of determining effects of the fluctuations of aggregates of money income. Thus, the marriage between the postulate of maintaining monetary demand by means of low interest rates and credit creation and the policy of high wages linked with public works comes about quite naturally. While it would be rash to insist that the period when these views were dominant showed no appreciable decline of unemployment *because* of them, the fact nevertheless remains that there was no such decline.

Stability of wage rates has been postulated also by economists for reasons not primarily concerned with the aspect of cyclical variations of wage rates. Pigou, for example, rather had in mind the combined effects of a largely

competitive situation of labor supply on one side and semimonopolistic conditions, as far as demand for labor is concerned, on the other side; to this was added the recurrent phenomenon of economic fluctuations which tended to depress wages during the downswing and which made it habitually more difficult for labor to recover lost ground. Not only does that notion not in the least tally with the recent American experience but if stated unconditionally it would mean that we should have witnessed, over the last decades, a generally decreasing wage level. This is rather paradoxical, no matter whether money wages or real wages be considered. The long-term change in incomes of wage earners is generally attributed to an increase in productivity but it would be rash to assume that this would be true of every, even if long-term, wage increase. It will surely be a doubtful proposition in case of simultaneous widespread unemployment, although rising productivity may have been one of the determining circumstances of rising wages. Rather the wage rise may be due to the increased power of new institutional factors which by blocking the labor market have induced industry to proceed further with the widespread substitution of labor by machinery. This process coincides with low interest rates caused by abundance of investable funds and perhaps also by a deliberate expansion of credit.

To the extent to which these forces combine to bring about the substitution of machinery for labor the productivity per capita of those actually employed naturally increased, but it is doubtful if this gives a good and complete picture. The experience with this process of substitution is very generally that the trend is never reversed. It would, indeed, be very unlikely to turn back at all even if the supply of capital were artificially increased over short periods, as, for example, with the aid of foreign loans. In the United States, however, the supply has risen for autonomous reasons to the extent of producing even a glut on the market. Should the policy of high wages be reversed—and this seems most unlikely—it would only be a small help in restoring the volume of employment in those industries where this process of substitution has gone far. The reason for this is that the new setup of production would largely have to be altered and the inducement to do so would not become effective in the short run without considerable repercussions, not all of them necessarily favorable in the upper stages of production. The labor market is not in the simple position of a market in which a disequilibrium caused by, say, deliberate cornering of supply can be corrected by a fall in price which will secure speedy, complete, and lasting absorption of the amount supplied. The demand for labor is a much more complicated function than the one used for describing the demand for finished goods; labor is intimately linked to the time-structure of production where reversal of trends is not possible in the short run without disturbing effects. Their extent will depend upon the particular stage in the system of

production as well as upon the significance of the actual and potential wage quotas for the cost of production at the particular stages.

Such developments are usually of an institutional character; i.e., lasting well over the duration of at least one ordinary business cycle. They may, however, be caused by a cycle and from then on contribute to the pattern and extent of the following fluctuations. There seems little possible doubt that this phenomenon has occurred in the United States during the last ten years. Given, furthermore, the continuation of population increase, we are apt to witness in the future a greater role in the determination of unemployment played by structural factors, while the variations in the total national income may still be explicable largely with the aids of an appropriate cycle theory. This result can only seem paradoxical; but we have seen above that unemployment is only in part dependent upon the vicissitudes of the mechanism which generates national income; i.e., upon the factors "within" the economic system itself.

If, for the purposes of cycle analysis, the difficult separation of the various components of the complex phenomenon of unemployment has been achieved, the ensuing analysis usually centers around the cyclical unemployment. This is then generally considered to be the "reserve" unemployment (of men and factors) which would determine the possible and the most probable expansion which would follow the slump. From this narrower approach a more extended expansion—possible because of the structural unemployment—would have random character while on the other hand this wider fluctuation in turn would determine the subsequent volume of "cyclical" unemployment.

Some of the limitations placed upon the predominantly cyclical explanation of economic disturbances have lately been discussed from various angles. I doubt if the analysis has as yet been carried far enough, but, in any case, it is not difficult to see that the traditional pattern is of only limited use for the analysis of unemployment. This places a heavy burden upon the analysis of a dynamic process which now has to be viewed in a much broader perspective. No conceptual tools for this kind of investigation are available and also the time-honored marginal productivity theory is limited even within the field of static theory. We are still lacking a generalized theory of income which would embody in a natural way the many cases which are now outside the realm of strict marginal productivity analysis.

It is, perhaps, not without interest to note that the two principal and opposing theories of the business cycle, namely, the overinvestment theory and the underconsumption theory, can very easily reach the same practical conclusions about the desirability of wage movements, although quite differently motivated. Both could postulate a rise of wages during the upswing: the first in order to let it exercise a brake by closing the widened cost-profit gap; the second in order to maintain the duration of the expansion. How-

ever, to my knowledge, the first postulate has never been made; perhaps, because in reversal of the above-mentioned position of Pigou, the authors fear that wages may not give way again. Nothing shows more clearly how confused the general opinions about this vital matter really are even among those who make this subject a field of special study.

The fact that the relationships between the various wage levels and the volume of employment in the corresponding industries are not well established in a manner which sufficiently takes into account the complex properties of a modern industrial system, makes it impossible to set forth any simple general propositions as strictly scientific results. They would be highly desirable, but at this stage they might be dangerously misleading. However, in order to make my own position clear I would say, doubtless in wide agreement with other economists, that in the case of cyclical and structural unemployment the foremost remedy that should be tried first and quite extensively is reductions in money wages; however, necessary steps should be taken to assure as far as possible that the total wage bill does not decline save, perhaps, during a very short period of transition. Wage policy of this kind consequently requires the greatest harmony with a liberal monetary policy of the country.

The second variable which deserves to be studied in this survey, but which shall only be referred to very briefly, is the question as to whether monopoly has much to do with American unemployment and whether it is likely to be of significance in that respect in the future. Some remarks have already been made implicitly, but only as far as the new monopolistic or semimonopolistic elements in the supply of labor were concerned. Now the problem arises whether industrial monopolies, about which we have heard so much lately, are responsible for the perpetuation of unemployment. Naturally, we are only concerned about their growth during the last decade since, if they had been stable during this time, their influence could not have been decisively greater than that which they exercised in earlier years with less permanent unemployment. The increased discussion is due partly to greater attention paid to interesting theoretical issues—often overrated in practical significance—and partly to a shift in the appreciation of their social role. The monopolistic elements of collective bargaining are indeed important, but they present a challenge principally to cycle analysis. Here, we are rather concerned with the different question, whether individual, nonconnected monopolies throughout the nation, particularly in manufacturing, exercise an autonomous influence detrimental to the volume of employment. Although this is an extremely important and often mentioned subject, I know of no studies, either theoretical or statistical, which deal with it extensively. It is, therefore, very difficult and hazardous to express a considered opinion about this topic here.

As a rule, it has been argued that a monopoly will rather allow the

volume of its production to fluctuate than its prices; so that during a depression unemployment should be expected to increase much more than in competitive industries. This is frequently found to be true in a very general way, but the point is that there may also be other explanations. The picture is blurred by the fact that monopolies are strongest in industries producing durable producers goods; moreover, they are generally of large size. In so far as they are very "capital-intensive," they usually have a small wage quota in their cost of production setup and consequently their demand for labor will be rather inelastic. If, besides, they should be of small quantitative significance in the general structure of production, we might be well advised to withhold judgment until a full examination of the case has been made. It is necessary to add, however, that this attitude does not in the least prejudice the opinions held about the pernicious characteristics of monopoly, inasmuch as these opinions are formed on the basis of a different approach. Monopolies may, of course, exercise a very powerful influence upon the volume of employment indirectly inasmuch as their policy of high prices may restrain other industries in their activities. Their significance has, therefore, to be considered under these wider aspects.

As far as the growth of monopolies during the relevant period is concerned I am also inclined to think that the evidence is not conclusive. The impression that they are much more important than previously is perhaps due to a greater awareness of their existence, and of their working, combined with the extensive study of the theoretical problems they offer. On the other hand, the growth of collective bargaining during the last ten years overshadows all these elements; but much less is heard about its active influence upon employment. Especially important is that those workers who can secure jobs and hold on to them under increasingly favorable conditions with the aid of their improved bargaining position are thereby also restraining opportunities for those who would take work under more moderate conditions. The monopolistic element of collective bargaining works, consequently, not only against the opposing party representing the demand for labor but also against the potential competitors who are employed in the same industry. In this respect there is nothing different in this monopolistic situation save that the limits at which other monopolies are held back are not enforced in an automatic fashion: first, there is little, if any, danger from potential competition (especially in view of the legal sanctioning of the procedure which does not give a direct vote to the unemployed) and, second, the indirect effects as represented by the transition to laborsaving machinery are diffused in time and space and cannot be clearly calculated.

The assertion that a "lack of investment opportunities" has contributed in a major way to the low level of employment is the third factor that

requires examination. Volumes have been written about this controversial question; at this convention two important papers examine the issues involved in a thoroughgoing manner. In view of their contributions may I be allowed to make my observations in a rather summary manner and with special reference only to the employment situation.

First, it is not without interest to notice that this argument has been chiefly made in England, and there it probably is due mostly to Keynes, although it is by no means new. In fact, it is part and parcel of the mentality of almost every big crisis and can be found in many a contemporary history of economic fluctuations in the nineteenth century. It is new, however, in the United States where formerly, with civilization then still moving visibly westward, it must have seemed quite out of place. Recently, however, it has been espoused by some professors and by those who realized quickly that it would offer a good background for systematic state interventionism and planning, with which they sympathize on other and more general grounds. It would be interesting, truly, to find out how the general public feels about it, whether they really, and rather suddenly, have become convinced that American economic life is set for permanent stagnation due to the alleged fact that new lines of investment cannot be found any longer by mere reliance upon the working of the economic mechanism. The basic facts of economic life itself seem to be altered; not scarcity of capital but its abundance appears in evidence. So far abundance has not presented any particular problems, and it is the more surprising that it should do so in the case of capital, the uses of which have universally been considered to be unlimited. The whole idea presents an especially basic anachronism today when throughout the largest parts of the world everything spells new destruction and appalling poverty.

In order to examine this case let us note from the beginning that underlying these arguments is the postulate of a relationship between the volume of investment and the volume of income and employment. This is in keeping with modern business cycle theory and is known as the "Wicksellian process" which has been rediscovered by English writers and has since then been described in terms of the multiplier and sometimes even coupled with the acceleration principle (knowledge of which also dates back several decades). The emphasis has to be, again, not on the volume of unemployment, but on the volume and the flow of incomes which are governed by the rate of investment. By investment we mean the construction of capital goods, primarily of a durable character, which will be fitted into the general production system with the aid of the price mechanism which also caused their creation by producing the appropriate inducing cost-price relationships. It will be clear that the "disappearance of investment opportunities" is a very vague notion—vague even for these economo-politic arguments—because it will depend upon whether the conditions under

which this phenomenon is said to occur are within the price mechanism proper or have to be looked for elsewhere. Since investment is after all still taking place in the American price economy, which is governed by much the same principles as it always has been over the last century, it is difficult to see why an analysis should not first of all be centered around these price relationships. The principal question to be asked is whether a disturbance within the price mechanism has caused gaps in prices which favor investment because the profit margins they reveal no longer appear. It is clear that new rigidities in prices, such as wage rigidities or taxation of profits, might be responsible for the slackening, or that the inventive powers which have hitherto played such a major role have disappeared. If an investigation runs in these terms very little remains of the alleged new fact of "saturation."

The process of a change and increase of investment is a dynamic one and depends largely upon the discovery of new methods of production which allow for the introduction of entirely new products or the improvement of old ones by new techniques. It is obvious that an increase in population will help as much as a mere quantitative expansion of markets, such as is brought about by the expansion of exports. In both these lines a slowing down has taken place, but it would be rash to attribute to it an overwhelming influence. Besides, population in the United States is still increasing and the exports of this country have certainly not disappeared, although they have been profoundly disturbed—in no small part due to the influence of American economic policies themselves.

The simple widening of opportunities associated with the frontier may very well have to give place to a different kind of increased use of capital. It is conceivable that such a shift produces a certain painful need for adjustment and as a by-product much frictional unemployment. It is also possible that this period of transition is associated with considerable gloom on the part of those who are directly hit by the need for adjustment. Every rearrangement of productive agents is an unpleasant affair; and it cannot be expected that the economic system will adapt itself quickly to new conditions if simultaneously further obstacles are placed in its way, say, of a legislative nature, to which it has not yet become accustomed. But to think that suddenly inventive power should have disappeared, that no new wants can be created—as if they were not always latent, everywhere! That no mere quantitative expansion of the production of already existing goods should be desired is really very hard to swallow. It requires only a perfunctory survey of economic history and of economic crises to see the absurdity of the entire argument. What people today do not see is that their very own thoughts and beliefs are only a by-product of the crisis which they want to explain in a seemingly unique and novel manner.

The whole situation becomes especially peculiar, almost tragico-comic,

when one realizes that the idea comes from "Old" Europe where it might have at least a semblance of truth and is applied to America where the dynamic character of life is still one of the most outstanding features of the country. This is not really part of an economic analysis; it is clearly some sort of psychosis to which some have fallen prey. Because these people either write or govern, the world we live in seems suddenly transformed in reality, while we lose sight of the really significant issues. Moreover, it might be good to remind oneself that this concept of disappearing investment opportunities fits beautifully into the Marxist system. Several decades ago we were dished up a new theory explaining economic crises in very much the same way; it was explained that at the time when the capitalistic system could not expand any longer in a given area it would do so forcefully by military power and the opening up of "noncapitalistic areas." We are living, now, in a period of imperialistic wars, but it would seem highly artificial to explain them in this simple materialistic manner. We must confess astonishment at Mr. Keynes's recent assertion, made in a radio broadcast, that Great Britain will emerge from the present war with few scars only and that she will be better off afterwards, because of the new outlets for capital. True, there will be plenty of outlets, but it is less certain whether there will be much capital to be let out.

It seems quite appropriate to carry the argument fairly far. First, it is presented by its supporters in a qualitative form only, which is wholly inadequate for economic reasoning, and, second, we are indeed faced at present in the United States with the creation of vast new investments via armaments. The question whether this will create an improvement in the national income or merely lead to a redistribution of a diminished total income by means of a considerable reduction of unemployment is a particularly important one. We shall deal with the role of armaments and of war in the next section separately but it is important at this point to see where they tie in with unemployment.

What really matters in regard to this popular argument is to find out whether the great decrease in investment activity we have witnessed so far in the United States is of that alleged different nature. I see no proof for this assertion and I do not think that even a reputable attempt has been made to offer proof. More or less vague descriptions of a great structural change have been given but as long as they remain superficial and incoherent they completely fail to convince the economist of the existence of such a transition. The reasons for the decline of investment have therefore to be looked for elsewhere and it is perfectly reasonable first of all to ask if they are not to be found in difficulties in the adjustment of the price-cost-relationships, which may be increased by new taxation, political uncertainties, etc. In these price-cost-relationships high money wages figure most prominently, a point which formerly always used to be stressed first

but the mentioning of which now has become almost taboo. In this respect theoretical analysis shares the blame with the more popular interpretations.

The great attempts to offset the fall of private investment by public investment have not been very successful save in very recent years when they were directed toward armaments. These are definitely noncompetitive, concern new commodities where the production sets a whole chain of new investment into motion, and—not without significance—are approved and even urgently demanded by the whole nation. Thus a favorable psychological atmosphere is suddenly created. The fluctuations of investment by their direct and multiple influences upon the volume of incomes are the principal elements through which the instability of our economic system always has become apparent. Public investment which has been tried out in many different ways has, as yet, not contributed to remove this instability. On the contrary, being investment proper and often being planned for political reasons, it introduces an additional number of unknowns. There is no *a priori* ground whatsoever to assume that it will lead to greater stability. One of the characteristics of public investment is, also—and it will probably remain one, save in the case of armaments—that its intentions are directed first of all to bring relief to specific areas, to certain groups of workers, and to given types of industries, instead of allowing these investments actually to take the place of the private ones. However, such a direct stepping into the gap is impossible unless the government turns manufacturer; and an indirect substitution would require a plan based upon a full knowledge of the dynamic system in its application to the ever shifting historical situations. Clearly, no such plan exists, and the knowledge of the dynamic process is still too sketchy to allow the working out of a well-considered plan even if that should be desired by the politicians. Public investments have, consequently, in the first consideration, rather the significance and effects of relief; their more general aspects are largely of an overwhelming monetary character. There is no word necessary about the well-established fact that the credit and interest rate position of the country has been made as easy as technically possible; we have also seen demonstrated, conclusively, that this alone is not enough to abolish unemployment; it may at best have prevented its further expansion.

A recent and very competent study about the present position of the durable goods inventory by Mr. G. Terborgh¹ contains the most devastating criticism of the factual basis of the argument of the disappearing investment opportunities. This investigation shows that unless the American economy somehow has produced devices, unknown so far to economists, which allow it to permit deterioration of its supplies of durable goods and yet to go on to produce a steady or even rising national income—not to mention defense requirements—a great boom in the durable goods indus-

¹ *Federal Reserve Bulletin*, October, 1940.

try is to take place sooner or later irrespective of the armaments program. This event would be quite in keeping with the elements of various researches into the nature of reinvestment cycles. The effects upon the labor market are bound to be considerable, and the already prevailing shortage of skilled labor, accompanied by bottlenecks in manufacturing, is likely to become more marked.

The only difference regarding the present evaluation of this particular argument of the absence of investment opportunities as compared with earlier versions of this theory will be that today more people believe in it than before. This fact is one more sign of the confusion that generally reigns in the world.

The fourth factor, war and armaments, is undoubtedly, at present, and for a considerable length of time to come, a major factor which will determine the future pattern of American employment. While nobody can even dimly foresee the directions into which the present world conflagration will take each country, how long the war will last, how far it will spread, and whether the formerly clear line of demarcation between peace and war will ever be re-established in our time, we can speculate upon some of the war's effects upon our problem. This cannot be economic analysis in any strict sense, but what has to be said is perhaps no vaguer than the writings which deal with the previously examined issue. We shall also have opportunity to refer to one of the most vicious simplifications to be found in economic reasoning, and which was already encountered before: the indiscriminate use of aggregate concepts. They illustrate very well what Edgeworth, long ago and in a different connection, termed the "loose indefinite relationships" which still abound in economic reasoning.

American arms production for home and foreign demand was very widely approved of in view of the unused resources which now could be expected to return to use. Among them, most notably, figure the unemployed. Lumping everything together indiscriminately into big groups, it looks, indeed, as if the new money demand would simply set these unused resources into proper motion and that we could expect a vast net increase in output at no other expense than the actual toil and sweat involved in making it. The experience of the last year alone has already shown how erroneous this primitive belief is and we have as yet hardly gotten under way. I do not think that economists disagree very much about this aspect of armaments, not least due to the fact that we have seen the same process demonstrated *ad oculos* in so many countries. It is easy to observe that nations have impoverished themselves for the sake of armaments. The differences in their positions are only quantitative, depending upon the size and speed of armaments and the volume and source of the funds on which to draw. Many of the costs involved are measurable in money; others are of a social kind, among them the effects of shifts in resources which

of production evidently apply here too. Another important factor, furthermore, is that the prices of airplanes, tanks, guns, etc., are not determined

have to take place, no matter how large the unused reserves, and which do not clearly enter into cost calculations. Later on frictional unemployment figures prominently.

It will do good to bear in mind from the outset that even in the United Kingdom unemployment continued large for a long time after the war had broken out, while arms production was running high and great numbers had been called for military service. This was partly due to the disruption of economic affairs. In the United States no net increase in total unemployment is to be expected; on the contrary, rising employment with a faster rising total wage bill will rather determine the situation. But these totals again blur the picture and furthermore the real effects upon unemployment will appear when the process of expansion slackens and even declines. More of this later.

Armaments differ from public works only in the essential aspects already mentioned; i.e., that the arms produced are definitely not competitive with the products of private industry. This is probably the chief reason why they are always and everywhere accepted so much more willingly by private business—provided there is no definite political objection against armaments. Other public works can never be completely noncompetitive in regard to current output and although it is sometimes hard to foretell where they will come into conflict with established interests, that it *will* happen is generally taken for granted, and this contributes to their bad reception among investors. The noncompetitive character of armaments cannot disappear, either, no matter how they may increase quantitatively. They compete, however, in a much more significant way for the resources of the nation by driving up their prices, by creation of priorities of other kinds, etc. The burden thus imposed generally does not give rise to opposition, because it does not become clearly visible for quite some time, especially as long as we have those unused resources.

However, as far as labor is concerned our present experience shows us quite clearly that the new demand for labor is most intensive in those fields where labor supply is *not* abundant; i.e., for highly skilled workers which do not figure prominently among the unemployed. It will therefore still take some time until the big masses of the unemployed will be called to their jobs. Very likely those who have suffered most because of prolonged unemployment will be least likely to benefit. Moreover, American arms production is already, and will increasingly become, a matter of highly capital-intensive production with large quantities of machines bearing the burden. Therefore a new element of relative technological unemployment—as compared with previous experience—may make itself felt, which might be offset by the size of the program. In spite of its present dimension it is hardly large and general enough for this purpose. The observations previously made about the role of money wages and the rise of costs

unemployment should reach any sizable proportion, interference could be carried still further either by continuing war industries beyond the point

of production evidently apply here too. Another important factor, furthermore, is that the prices of airplanes, tanks, guns, etc., are not determined like those of other commodities and the role of prices is decidedly a minor one. This will contribute in large degree to the further obliterating of the significance of that type of economic calculation which has so far generally regulated the direction, the quantity, and the speed of the economic processes.

If we try to look ahead farther, a less pleasant prospect opens before our eyes: the inevitability of a major crisis and perhaps a great upheaval once armament production comes to an end when the war is over. The American economy will then be faced with a problem of adjustment to a peace economy of proportions which now can only dimly be foreseen. Much will depend upon the duration of the present world conflict—not to mention its outcome—and upon the degree to which the disruption of economic life of the forms still familiar to us will have gone. It is tempting to think of this future period of readjustment in customary terms of business cycle analysis. I greatly fear that this would be quite misleading, and far too simple. The cycle pattern was already weak and distorted throughout the years since the outbreak of the last war and the mere size of the present growing effort to arm will so greatly endanger it that our analysis will have to become more flexible. The shift of industry back to production of consumers goods will indeed be very similar to the transformation of the economic system as described by the overinvestment theories. But one very big difference will come into existence. The arms production involves an increasing number of controls over prices, over uses of materials, and perhaps later on also over labor (depending upon the extent and urgency of the effort). This means that we have to shift back not only to other production lines but also back to a free pricing system. Whether that will be done at all is very doubtful, certainly in the warring European countries. Whether, if attempted, it will proceed smoothly in this country and whether we will want this transition at all, are at least open questions. After the last war the transformation was made rapidly, but a big postwar crisis developed.

Assuming that a repetition of a postarmaments crisis—avoiding the more radical term postwar crisis—is expected, it becomes quite evident that a great effort would be made to interfere successfully with its course. The problem would be to create a consumers' demand sufficient to absorb the workers now and in the future engaged in making arms. There are many ways in which the demand can be created, each one pointing towards inflationary policies—inflationary largely for the reason that the corresponding shift in production cannot, in all likelihood, be achieved as rapidly as demand would grow. Bottlenecks, with accompanying unemployment, of the same type we are now witnessing would inevitably appear. If this

unemployment should reach any sizable proportion, interference could be carried still further either by continuing war industries beyond the point of requirements or by substituting public works.

The wage level, likely to rise considerably in the near future, will not easily be brought down for reasons which are well known. The really great future problems of American labor spring from these difficulties. Paradoxically, the country will fare much better if they are not delayed too long, for the simple reason that they will be proportionally greater the longer the period of the war economy lasts. But this is no paradox to the economist, familiar with the basic facts of economic fluctuations.

If it should still be desired to shift back to a free price economy after the war is over—this cannot be taken for granted in view of the accompanying social changes in many countries—the adherents of the capitalistic system will be well advised not to advocate a too rapid transition. The free economy would indeed have a bad start if it had to be reborn in the midst of severe crisis and great confusion. On the other hand, if the inevitable crisis could be decidedly mitigated by successful planning, the forces advocating collectivist forms of economic organization will receive such mighty support from such success that people will wonder whether they should take the chance of abandoning the collectivistic attitude at all. The last war has left upon each economy the imprint of greater state interference and the present war will do so to an even greater degree. Although carried out by private manufacturers and free laborers, arms production brings all of them into direct subordination to the state, a fact that will make itself felt especially after the event; a fact which will largely contribute towards determining the policies regarding future unemployment. It would not in the least be surprising to see labor service and other similar forms of organized control of, and support for, the unemployed arise after the war.

To sum up: The armament program works like any boom with perhaps even greater inflationary effects. The longer it lasts and the more important it becomes quantitatively the greater will be the later disturbances and waves of unemployment. Economists will render a very great service to their country if they will devote intensive study to these problems, in order to be in a position to make timely suggestions fearlessly when the need comes, and come it will.

This brief and all too sketchy survey of some basic factors determining the volume of employment in the United States would be incomplete without due reference to the fifth factor mentioned in the first section; namely, the role of international trade. The last war has left its imprint upon the world very largely via big shifts in the volume and composition of trade. The United States has been greatly affected in this way and the same process begins to develop again. It is impossible to foretell what will happen to

American exports save that the large and increasing exports of war materials naturally depend upon the course of the present war. They are likely to increase vastly only some day to stop abruptly, which would entail major disturbances unless the United States Government is prepared to step in as a purchaser, probably at a time when its own demand for war materials will decrease. Foreign demand for war materials exposes the American economy to the same dangers as those discussed above, and the interaction is likely to be cumulative. The development of foreign trade is not only important because of its size but also because of its composition. In that respect the international situation after the war—again assuming that there will be ushered in a normal peace period and not an epoch of military watchfulness and military economics in great parts of the world—will be of vital importance to this country. If it is possible to see international trade re-established quickly, it is conceivable that the new demand for raw materials and producers goods with which to rebuild the destroyed industries, harbors, and railroads of Europe might bridge the gap caused by cessation of war-generated demand. Clearly, this would be in the interest of American labor which would be relieved of at least some of the frictional unemployment otherwise to be expected. Foreign trade is not, as has often been pointed out, of the same tremendous importance to this country as to many nations in Europe. However, exports are large enough to set into motion a multiplier similar to the one caused by public and private investment. At the same time, by the revival of international trade, foundation stones for a lasting improvement of the conditions under which international trade is carried on could be achieved. This may seem far off the problem on hand, but it would be very harmful not to see the important and direct relationships which in truth exist.

The maintenance and extension of American exports after the war—probably already during the war in case it lasts several years—will not be possible without the solution of the problem of their financing. In other words, large international credits are indispensable. There will be very little inclination in this country to consider lending abroad on a large scale and yet the answer given to such demands may very well influence the volume of employment of industry to a decisive degree. The dilemma does not lie only in the fact that credits have to be extended, if major disturbances are to be mitigated, but also in the need for their speedy arrangement. The failure of many otherwise reasonable policies is to be attributed often mainly to their poor timing. This timing would be of very great significance for the resumption of foreign lending. It will, however, be impossible to undertake such steps without sufficient public support which has to be readily given at the crucial time. How this could be expected is hard to see when one considers the attitude this country has taken during the last decade regarding finance in general and international finance in

particular. Only an incurable optimist could assume that international trade will be maintained at the conclusion of the war in a volume sufficient to support a high level of employment. If labor should become fully aware of its precarious position due to the armaments boom, it might be possible to prepare a common policy.

It is not possible to go into details here, but it might be mentioned that the mere technical difficulties will be enormous, also, for the reason that the financial organization of the European countries will likely be in a state of complete collapse, and that out of it new forms may emerge with which we are now not familiar. This will, again, not be conducive to the resumption of international financial operations which would be so helpful to American labor. More specifically, private financing will encounter such great and new obstacles that the government will have to step in and thus make the matter entirely political. Theoretically, a great opportunity is presented here of co-ordinating the various policies which taken together should contribute towards mitigating the prospective postwar slump. This is, however, not the place for a more detailed discussion.

The five factors discussed reveal the existence of major forces which jointly will play a large, perhaps the principal, role in the determination of the volume of employment in the United States. A proper scientific analysis should also attempt to ascertain the precise nature of their interaction and of fitting the theoretical results thus obtained to the concrete data of changing American economic conditions. In both respects the obstacles faced are tremendous, partly because of the utter inadequacy of our analytical tools, partly because of the impossibility of determining the factors quantitatively in the past, not to mention the impossibility of their projection into the future. To determine the interdependence of factors like these is a formidable task even under strictly static conditions; it becomes well-nigh hopeless if a concrete historical situation has to be faced with the view of extrapolating into the future. Scientists can only smile at those who confidently make "positive" statements or demand them. What might appear to be the one anchor of their hopes—the regularity of the business cycle—may also go to pieces, thus depriving them of the principal key with which to unlock a door to the future.

THE ECONOMISTS AND UNEMPLOYMENT

By E. WIGHT BAKKE

The most striking common feature of the papers on unemployment is their recognition and demonstration of the inadequacy of available data and analytical tools for understanding the nature and extent of the problem under discussion. The honest attempt by both writers to deal with the problem scientifically is evident. Dr. Webbink's paper deplores our carelessness in defining unemployment, in adapting public measures to its realities, and in setting public policy in terms of political expediency rather than in line with careful analysis of the problem itself. Professor Morgenstern guards every conclusion with a warning as to its inadequacies, and demonstrates a very real awareness of many "accidental" factors which disturb the most careful scientific prognosis. Whatever may be the reaction of those responsible for public policy to such a discussion, the scientist will find much food for thought in both papers. Implicit always, and explicit frequently, are suggestions of the steps necessary as a prelude to accurate prediction by, and wise counsel from, economists concerning the problem of unemployment. If it is desirable that we be able to function in the roles of prophet and counselor, and if we find ourselves unable to do so competently at the moment, we had better admit it, find the reason why, and correct our ways. No effort can be more appropriate to a meeting of this sort.

The reader of these two papers can find stated in part the reasons for the lack of a clear word on unemployment from economists: lack of precise definition, lack of reliable and adequate data, and lack of applicable theory. He can also arrive at certain conclusions as to our shortcomings from observing the authors' attempts to analyze inadequate data with imperfect tools of analysis, and by contemplating the authors' conception of and approach to the problem represented by that attempt. If I use this opportunity to amplify those conclusions rather than to "say something positive about unemployment," it is because I believe it is more important that we discover the reason for our lack of wisdom than that we try to cover it up by positive but unsubstantiated statements.

The outstanding reasons for our inability to contribute positive and substantial advice with respect to unemployment seem to me to be these:

1. We have not accurately defined the categories we are attempting to study. Our measurement of their quantitative aspects is therefore not accurate, the measurements we have made are of little use for specific purposes of public policy, and they are misleading as a guide to public action even of the most generalized sort.
2. We have not developed a conception of the reality of unemployment as a labor market problem in its own right. It has been presented as a problem *connected with* certain other economic problems, and it has been assumed that the solution of the latter would automatically clear up unemployment. We have discussed it, with only incidental reference to the realistic factors and behavior in the labor market, chiefly as an *accompaniment* of the fluctuations in business and industrial activity, or as the *result* of the application of certain wage policies, or as the *consequence* of certain changes in technology or industrial organization.

3. If we have paid attention to the realities of the labor market, we have been chiefly concerned with the nature and volume of the demand for rather than the supply of labor.

4. Finally it is possible that the assumed boundaries of our economic science are too narrow to comprehend a problem of such dimensions.

I should like to discuss each of these causes of our present inability to speak with authority and wisdom on the subject of unemployment and with respect to the appropriate industrial, trade union, and government policy for dealing with it.

The consequences of the lack of precise and meaningful definition of unemployment are so clearly set forth in Dr. Webbink's paper that there is no need for further discussion.

The conception of the problem of unemployment as an accompaniment of fluctuations in other economic developments, which in turn produce fluctuations in the demand for labor, is well illustrated by the approach to the problem taken by Professor Morgenstern. It is understandable that economic theorists attempting to understand the fluctuations in business and industrial activity, the effects of certain wage policies, the relations of structural and technological changes to the functioning of the business economy, and the impact of qualitative and quantitative changes in foreign trade upon economic life, should treat unemployment as a quantitative phenomenon accompanying the trends, which are their main subject of investigation. No one would deny that such trends have important causal relations to the fluctuations in the volume of unemployment. The student of unemployment is indebted to these specialists for their intensive, practical, and theoretical investigation of what may well be the chief causes of gross fluctuations. Professor Morgenstern has amply demonstrated the significance of wage policies, monopoly practices, investment opportunities, defense expenditures, postwar shifts in industrial activity, and foreign trade upon the demand for labor. And he has not hesitated to imply or suggest positive policy consistent with his demonstration in his comments on the "purchasing power ideologies," on the desirability of wage reductions "with adequate safeguards to prevent a reduction in total workers' income" (whatever that may imply), on the impact of trade union monopolies, on taxation of profits, on the needed change in conception of investment opportunities, on the shortcomings of public investments (save those for armaments), and on the creation of consumers' demand and the financing of foreign trade after the war.

When it is suggested that unemployment is, however, an economic problem in its own right, one is simply emphasizing that causes and effects include many factors which impinge upon the labor market which do not find a ready niche in the theories developed concerning such matters. Lacking adequate data on and analysis of these labor market factors we have little choice but to accept the gratuitous contributions of the theorists as the most adequate word to date. But there is no reason to hope that the study of unemployment as a subject of *incidental* interest will lead to a full understanding of its nature however adequately the theories of business cycles, wages, technological and structural change, and foreign trade may be developed.

It is commonplace to say that a reduction of unemployment involves the estab-

lishing of a more perfect equilibrium between the demand for and the supply of labor. The approach taken by Professor Morgenstern certainly reveals important, and probably controlling, factors in the determination of demand. It offers relatively little with respect to supply. Any estimate even of the significance of demand for labor in this situation, however, must be premised on much more detailed evidence as to when, why, where, and in what quantity jobs are or will be offered. Further evidence must be sought as to the nature of and requirements for such jobs.

Exploration through intensive and exhaustive labor market studies of questions like the following would considerably expand the factual basis upon which analysis could rest: What considerations other than relative costs stimulate employers to substitute mechanical instruments for man power? Is present or potential demand for labor in areas of "capital-intensive" production or in other areas, and how is demand distributed with respect to this organizational feature? In industries where labor demand is increasing is the relationship between labor and overhead costs such that solution of the bottleneck-of-skilled-labor problem through overtime rates does not seriously impair their competitive position? What is the observed effect of plans for or incentives to stabilization of employment on the demand for labor? What are the limits on the stimulation of demand for labor by a decrease in wage rates? What variations in elasticity of demand subject to this variable are observable as between certain firms and industries? What is the relative quantitative and qualitative significance of the demand for labor produced by firms operating under these varying circumstances? Is there an optimum combination of factors which when established would discourage the further absorption of labor no matter how cheap it became? What actually are the variations in hiring policies and employers' preferences and needs with respect to labor? What are the observed sources of labor for new enterprise?

If the answers to such questions as these relative to the demand for labor are not readily available on a scale sufficient for the theorist's use, still less adequate are the answers to questions which need to be asked with respect to the supply of labor. Why, when, where, how, and in what quantity do persons become available for, competent to, and willing to perform particular tasks? What is the observable effect of trade union policy, apprenticeship and training practice, social legislation, fluctuating earnings, costs of living, technological changes, and similar factors upon the processes by which these results are accomplished?

What are the nature and magnitude of shifts of workers into and out of the labor market? In response to what factors is mobility of the several sorts encouraged or discouraged? What differences in the willingness to work and to change work is resulting from a shift in the basic character of the factors back of labor turnover?

What is the realistic character of the labor reserve represented by the unemployed, and what implications has the answer to this question for the possibilities of an expanding production? In a city having 13,000 registered unemployed, it was recently proposed to build plants for nominal rental to employers who could use this many workers. Indicating several possible types of industry which might use these plants, I asked the manager of the State

Employment Office in that city, "How many unemployed workers would such employment opportunities remove from your rolls?" His answer was, "About 2,500." He was very pessimistic, but his answer is one more warning that analysis of the fluctuations in business enterprise and consequent demand for labor cannot of itself give the answer to fluctuations in employment and unemployment.

What has been the effect of unemployment, work relief, and direct relief on the morale and employability of the unemployed and upon the conditions under which they will accept employment? What are the differences in the problems of reabsorption faced by those thrown out of work by cyclical and by structural causes? On the basis of past experience, what reduction in readjustment problems in a post-armament economy might be effected by policy with respect to "dilution" of labor and training of workers for newly defined jobs?

This list of questions could be greatly extended, but it is scarcely necessary to do so in order to demonstrate that such factors involved in the actual nature and functioning of the labor market can make the most carefully established probable correlation between employment and the demand for labor at best a hazardous guess. Such factors may be "accidental," but somewhere in the midst of the circumstances generated by their cumulative impact lies an explanation of the inability of theories of business operations to provide adequate guidance for policy with respect to unemployment.

The study of such factors can do more, however, than enlarge our knowledge of the realistic economic behavior both in the demand for and the supply of labor. Such knowledge can contribute to the more perfect development of the theories of business operations themselves. Out of the analysis of such data should come a more realistic conception of the supply curve of labor than that based upon the assumption of a nicely graduated response to changes in wage rates. Wage theory and theories of the relation of fluctuations in wage rates to the volume of employment have long needed the corrective discipline of a body of facts concerning the actual behavior under varying circumstances of employers and workers in response to such fluctuations. Every economist is aware of the inadequacy of contemporary wage theory. But without the exhaustive labor market studies still waiting to be made, we are not in a position to undertake the formulation of an inductively built theory at least approximately consistent with the observed facts of economic behavior. Professor Morgenstern, for instance, is in a much stronger position when he attacks the exponents of high wages during periods of decline in business activity than when he declares his faith "doubtless in agreement with other economists, that in the case of cyclical and structural unemployment the foremost remedy that should be tried first and quite extensively is reduction in money wages." For that agreement is possible primarily with the help of a theory of wages scarcely less rooted in studies of economic behavior than the "purchasing power ideologies" he very properly criticizes. True, much work has been done in studying the effect of wage rates on the volume of employment under varying circumstances relative to ratio between labor and overhead costs, to efficiency of management, to elasticity in demand for products, to availability of capital resources, and to like variables. Professor Morgenstern, himself, has indicated several realistic problems in the application of present wage theory to a dynamic situation. He points out that

the reversal of a high wages policy may be of small help in restoring the volume of employment in those industries where the process of substitution of machinery for labor has gone far; that a fall in price does not act to reduce the supply of labor as in the case of other commodities; that labor is intimately linked to the time structure of production where a reversal of trends is not possible in the short run without disturbing effects; that bottlenecks of particular kinds of labor may retard the absorption of all kinds; and that demand may be in areas where the labor supply is not abundant. But the knowledge of such "accidental" details has not been woven into the oversimplified wage theory on the basis of which the conclusions, for example, as to the beneficial effects of wage cuts are made.

Professor Morgenstern is constantly aware of the inadequacy of his theoretical tools and data. He frankly recognizes the factors which upset the validity of predictions made on the basis of cyclical or wage theory. My point is that such theories will never lead to adequate prediction as to the extent of unemployment nor to an understanding of its nature, for they are based on generalizations concerning a relatively few of the many factors which influence these matters. Moreover, even these few are factors of demand and are coupled with no systematic generalizations concerning factors of supply.

In spite of the frustration which must be the experience of the analyst under such circumstances, it is not to be regretted that theory which would be specifically applicable to the more complete explanation of the phenomenon of unemployment is not available. For in the present inadequate stage of our knowledge of all relevant labor market facts, such theory would have to be largely deductive. Economists interested in the development of theory by the inductive process find the field unoccupied by theories developed before the facts are adequate and thoroughly understood. The study of unemployment as a labor market problem in its own right, the factors both of demand and supply which are at its root, the operation of these factors under different circumstances of economic organization and behavior, may be expected in time to produce these facts.

Economists may be excused if they insist that they are unable and unwilling to correct or modify their theories by reference to inadequate and unsystematic labor market data. But as a group, economists cannot be excused for long if they neglect to make adequate and systematic their knowledge of the actual economic behavior, institutions, and circumstances which their theories are supposed to explain.

Very few economists would dispute the fact that all investigation designed to clarify the problem of the adjustment of the supply of labor to the demand for it is a legitimate pursuit for the economic scientist. But there are many who would challenge as necessarily unscientific the exploration of the subject of unemployment outside of these terms of reference. Without claiming the possibility of scientific validity for such exploration, one may nevertheless emphasize that it is not inconsistent with the scientific attitude to pursue a problem to its ultimate boundaries as long as those boundaries encompass only data which can be observed and verified through the five senses. The issue is whether we shall be limited in our interest by the subjects dealt with by our theoretical tools of analysis, rigidly restricting our search for data to that type which is obviously

relevant to a more perfect development of our present theory; or whether we shall be guided in our interest by the nature and ramifications of the problem itself. My own position is that ultimately not only a satisfactory analysis of the economics of unemployment but also the requirements of scientific endeavor suggest that the latter choice be made. Let me cite briefly two examples of this issue.

One characteristic of the economist's approach to the study of unemployment which has impeded progress toward a more perfect understanding of this problem has been the tendency to neglect the effects of unemployment on workers. We have turned over the consideration of the human needs and adjustments involved in unemployment to either the humanitarians or the sociologists. Yet this aspect of the problem is vital to even rigidly economic concerns. These effects may sufficiently impede the reabsorption of labor so that predictions made on the basis of anticipated demand for labor are quite unreliable. Difficult as it may be to represent such changes in the qualitative character of the reserve of labor, these changes cannot but effect quantitative trends in re-employment.

Moreover, the economist's legitimate interest extends beyond the mere employment of labor, to its efficient functioning in the national economy. Labor is the most important of our national resources. It is frequently forgotten that a unit of such resources is not coextensive with an individual worker. If the effects of unemployment reduce the units of labor power available from the employment of that worker, our national resources have been decreased proportionately. Measures taken to improve the efficiency of and to conserve this type of resource can be justified quite apart from humanitarian concerns. The number of effective labor units available in the employment of a single worker is as important a determinant of labor costs as the wage rate at which that worker is employed. If study of the productivity of labor is an appropriate endeavor for the economists, no factor such as the impact of unemployment on that productivity can legitimately be neglected. Furthermore it may be argued that even such intangible concepts as "willingness to work" or "self-reliance" are scarcely less vague than such concepts as "propensity to save" and are definitely less vague than that residual explanation of investors' behavior, "business confidence."

Finally, it is relevant to point out that the fact of unemployment and the adjustments in economic endeavor made necessary by it are arresting challenges to the assumption of many economists that in studying the economics of the business system they have investigated their only legitimate field. For these facts are a clear warning that the social economy has boundaries broader than those of the business system as such. The fundamental economic problem is the maintenance of all individuals in the economy from birth to death—through the economic provisions described as the business system if possible, but through broader economic agencies if need be.

In a nation in which the greater share of economic maintenance activity has come to be channeled through employment within the institutions of business, it is natural that we should be concerned primarily about the effective operations of those institutions as such, and that we should estimate the economic soundness of what at the moment appear to be the supplementary functions of community agencies, and in particular of government, in dealing with unemploy-

ment, by reference to their effect on business. But it is well to remember that business institutions have not always been the dominating agencies for self-maintenance, and that their relative importance may again be altered. Our concept of free income demonstrates our present major premise, and one justified on the basis of present institutional arrangements. But the significance of agencies providing so-called "free" incomes does not lie solely in their impact on business operations, though at the moment we may be justified in considering this aspect as of primary importance. For the economist their significance lies as much in the trend in institutional arrangements they indicate and the consequent scope of his basic problem. For they are economic adjustments made within the social economy for accomplishing the basic goal of economic activity: the provision of maintenance as adequate as possible for every member of the society concerned from birth to death.

Professor Morgenstern's discussion of the effects of war indicates his awareness that the scope of the national economy is broader than that of the business system. The subjection of economic life to control by the state, the provision of social services, the participation of government in the elaboration of credit facilities and in the financing of foreign trade is not merely evidence of government activity for the sake of the more effective organization of private enterprise to provide full employment and maximum income; it is evidence that the institutions of economic life are in flux, and that the economists will be poorly equipped to understand, predict, or counsel, with respect to unemployment, if their conception of their problem is limited by their preoccupation with the operations of the business system without due regard to the changing place of this aspect of economic endeavor within the total economy.

The reluctance of the economist to push out the frontiers of his science even when a particular problem such as unemployment escapes present boundaries is understandable and commendable. Our science has not yet mastered the analysis of the processes of the business system itself. Certainly it has not developed to the place where we can with assurance include the operations of the total social economy in its subject matter. For the sake of the development of scientific methodology we do well to consolidate our positions before moving hastily across new frontiers where objective data are even more difficult to obtain. For reasons of methodological expediency, and for the purpose of preventing our generalizations from evaporating in the thin air of qualitative phenomena, and for many other good and substantial reasons, we have kept our basic studies, and particularly our theoretical studies with respect to employment and unemployment, geared closely to the operations of the business system. That is common sense. But even the type of scientific questions we ask about the most specific economic problem will be determined in large part by the conception of our ultimate field of investigation. Certainly unemployment is one economic problem whose causes and effects and whose significance cannot be understood on the basis of data and analysis confined to a limited group of economic institutions. Adequate understanding, prediction, and counsel, if ultimately possible, will be grounded in economic science which incorporates the functioning of the total social economy within its boundaries.

THE UNITED STATES IN THE WORLD ECONOMY, 1940

(Two main papers and one review paper)

AN ECONOMIC FOREIGN POLICY FOR AMERICA

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Surely a detached observer, witnessing the events of the past decade, could write the recent history of international relations very largely in terms of a single phenomenon: the constant narrowing of the range of action open to the democratic powers to advance their own interests. As short a time as five years ago, there was available to these nations an effective policy designed to shape the world in a direction dictated by their enlightened self-interest. It was called "collective security," and the critical points at which it could have been brought to bear were numerous and decisive. But unfortunately it was impossible for those whose interests would have best been served by such a policy to agree to be effectively collective about their obviously mutual security. Instead, the democracies met each aggressive threat of the growing totalitarian menace by inaction, nonintervention, and appeasement. With each successive surrender to the fascist powers, their strength was augmented and that of their opponents diminished, until today Britain, almost alone in the west, and China, in the east, confront their opponents in a life-or-death struggle.

Just as the scope of international action open to the democratic countries was finally narrowed down to the alternatives of surrender or fight, so has the choice available to us in the United States become equally limited. Actively to influence the decision, now submitted to the final arbitrament of war, as to what political and economic system shall rule the world, we can only aid the military effort of our friends and hamper that of our enemies. We could, of course, withhold all aid to either side, adopt a policy of complete isolation, and prepare to make our peace with a totalitarian world. This, however, would be tantamount to submission, and would certainly negate the basic objective of national policy: to influence the course of events in a direction harmonious with our national interest.

Fortunately, in my opinion, our choice of these alternatives has been prompt and vigorous. Hatred of totalitarianism and sympathy for its victims, together with a dawning realization of the implications of a Nazi-fied world order, have led the American people to sanction "all aid for Britain short of war" and the gradual extension of embargoes against Japan. Though unwilling to undertake direct military participation in the conflict, we have chosen to resist the spread of totalitarianism by throwing

the weight of our immense industrial resources behind its opponent. In thus choosing a policy of resistance instead of submission, of supporting one side instead of withholding our aid from either, we have abandoned all pretense of neutrality and issued a declaration of economic war. Explicit recognition of this fact is important, in general to avoid self-delusion, in particular for what follows in this paper.

The possibility obviously exists that the military effort of Britain, even with our economic participation in the war, may fail. In that unfortunate event, we should again face the necessity of choosing whether to continue to combat the spread of totalitarianism or to make our peace with that system. Certainly the struggle would have to be continued on a far narrower base and more unfavorable terms. An Axis victory will almost certainly mean a western Europe organized into a single great empire, with whatever local autonomy remains to formerly independent nations subject to German veto. There is every reason to believe, on the basis of past developments, that this entire area will be organized as an economic unit, centrally directed from Berlin. It seems equally certain that individual freedom will not be tolerated, that totalitarian principles will be increasingly applied in the economic as in the political sphere, and that external trade will be planned to suit the conveniences of the Nazi regime. Since the war is now an Axis affair, success in Europe would presuppose the establishment of the Japanese "new order" in Asia, with, presumably, the U.S.S.R. continuing to exercise sovereignty over its present area. With the Eastern Hemisphere thus dominated by totalitarian powers, the Western Hemisphere countries would be—with the sole exception of Australia and New Zealand—the only independent nations left.

Some sentiment in favor of accommodating ourselves to this possible new setup already exists in this country, the hold of which would unquestionably be stronger with the prestige of the Axis powers heightened by victory in the present warfare. Adherents of this view, while sharing in the popular demand for adequate defense against invasion, regard that as an unlikely eventuality, and contend that we should do as much business as possible, on a normal trading basis, with the totalitarian powers, otherwise attending strictly to our own affairs.¹ It would be most comforting if we could assume that everything would be as simple as this, in particular that trade with Europe would continue along "normal" (i.e., traditional) lines, and that we would be allowed to attend to our own affairs in undisturbed peace and security. But there is no shred of evidence

¹ A recent (September, 1940) poll of the opinion of 15,000 business executives conducted by *Fortune* magazine on the issue of trading with a possible German economic bloc gives the following interesting results: 33.3 per cent, trade as much as possible; 12.5 per cent, all that comes our way; 37.5 per cent, depends on circumstances; 10.6 per cent, as little as possible; 2.6 per cent, none at all; 3.5 per cent, don't know. The first three categories, comprising some 83.3 per cent of the total, might perhaps reasonably be called potential adherents of a business-as-usual, appeasement policy.

to indicate that these assumptions would be valid. Indeed, every consideration points to exactly the opposite conclusion.

First, in view of the expressed hatred of Nazi-Fascist leaders for the "pluto-democracies" and for the liberal philosophy to which these are committed, is it likely that after destroying everywhere else in the world all traces of this rival system they could tolerate its continuance here? The chance seems small indeed, particularly if the United States is able to make its challenging economic and political system operate successfully. Secondly, the temptation to dominate over a rich but divided people would be very great, especially in view of the fact that such domination would provide the immense psychological satisfaction of achieving complete political conquest of the world. Thirdly, such intimations of the new economic order contemplated by Germany's rulers as have been allowed to seep out of that country² do show a willingness to continue trade with the United States and to "share" Latin-American markets with us. But in view of the probable unification of all European trade through a gigantic cartel, and in view also of the past activities of Nazi agents in the countries of this hemisphere, it would seem reasonable to suppose that the deciding voice in these matters would be Germany's, and that trading arrangements would be made with an eye to political results.

Considerations such as these lead inevitably to the conclusion that this nation would confront certain easily definable dangers. The least of these, provided we push to a successful conclusion our preparations for military defense, would appear to be an actual attempt at invasion. The difficulties of carrying out military operations at points distant from one's bases, confronted besides by strong naval and air forces, serve to render this a rather remote possibility. Far more likely would be efforts to sow dissension and disunity within our borders, to set each country in this hemisphere against its neighbors, and to use the resultant chaos to bring about a bloodless conquest of the Americas.

The past history of Nazi *realpolitik* points clearly in this direction. Moreover, the immediate postwar situation would in all probability facilitate the implementation of such a policy. The collapse of our war trade, the continuance of troublesome agricultural surpluses, the reappearance of mass unemployment, the high prestige of victorious totalitarianism—all these would create a situation made to order for the Nazis. By holding out the promise of large purchases to the benefit of certain groups while insisting upon corresponding sales to the injury of others, by skillful pressure upon those benefited to silence criticism of the Nazi regime, and by fomenting discontent and opposition among the unemployed and the injured groups, the usual tactics of conquest by dividing opposition should

² As, e.g., in the interview with Dr. Schacht published in the *Nation* of September 7, 1940.

prove as successful as in Europe. Furthermore, the appeal of a revolutionary economic system which had succeeded in uniting, albeit by force, the entire continent of Europe and had abolished, though by compulsion, the spectre of unemployment, would be immense. The mere existence of this rival system would in itself constitute a constant inducement to imitation.

Perception of the nature of the dangers which would face us should suggest the appropriate means of avoiding them; namely, firmly to unite, both within this country and within this hemisphere, all elements opposed to Nazi domination, so as to present to each effort at division a solid, unbroken front. Moreover, since the campaign of bloodless conquest will presumably commence immediately, if and when Britain collapses, preparations to meet it must be made now, before it is too late. Even though the danger now seems remote, and although the chance of its materializing may be, in actuarial terms, but slight, the stakes are so immense that insurance is absolutely essential. A program to provide this insurance would be, in essence, a war policy, for it would embody the realization that what would confront us *was* war, even though waged primarily with economic and political weapons. It is the main task of this paper to consider the requirements of such a war policy, the issues it presents, and the difficulties it raises.

So far as concerns any purely military dangers, we are fortunately in the process of making adequate provision. Our national defense program is being vigorously and rapidly prosecuted. Arrangements have already been made with Canada for joint action in defense. Moreover, the time required to provide adequate military preparedness is in part ensured by the recent acquisition of Atlantic military and naval bases and by the continuation of war in Europe, with its attendant destruction and economic disorganization.

As we have seen, however, the menace implicit in a victorious Naziism is not primarily military in nature. Attention has been called to the challenge of an integrated, authoritarian Europe in which unemployment has been abolished, even though it be by the use of methods reminiscent of a prison. Note was also made of the economic strategy employed to engender dissension among opponents. To meet these dangers, action in the economic and political sphere, and in at least three directions, appears essential.

First, the threat arising out of the revolutionary aspects of totalitarianism, a threat which will mount if victory permits the erection of an integrated European economy, must be met by effective countering action. This clearly calls for a reinvigoration of democracy, the realization of its implications—which are infinitely more inspiring than the doctrines of totalitarianism—in far fuller measure than in the past. Domestic economic

and social policy cannot halt where it is today; it must provide long-range solutions of the problem of unemployment, of insecurity, and of inadequate standards of living. Few can be found to defend with spirit the *status quo ante*, a fact which in part explains the sudden collapse of the French Republic. Much more must and can be done, even while our preparedness program is under way, to build a decent social order. Regarded in this light, and provided we act in such a spirit and toward such an end, the challenge of the totalitarian revolution might be a boon to democratic forces in this country.

A second direction in which vigorous action is necessary derives from our international economic position. We are not a self-sufficient country. We depend upon outside sources for supplies of many vital products. To be secure we must therefore take steps to ensure that these supplies are always adequate.

A recent (March, 1940) study by the Army and Navy Munitions Board lists fourteen "strategic" and fifteen "critical" materials for the supply of which we are dependent either wholly or in important part "on sources outside the continental limits of the United States." Of the fourteen strategic materials, we are dependent for our supplies of nine upon Asiatic countries.³ For only one, mercury, do we have to go to Europe, while for another, chromium, Africa furnishes some half of our total requirements. The three remaining materials—antimony, nickel, and quartz crystal—are obtainable in amounts adequate to our requirements from this hemisphere.

Of the fifteen less vital critical materials, only three present a serious problem of supply: cork, crystalline graphite, and opium. Increased domestic production could probably take care of optical glass, toluol, and phenol, while of the nine remaining commodities,⁴ all but one (kapok) are either available or could readily be made available in sufficient quantities from countries on the American continents.

Because of our great dependence upon outside sources for many of these vital sinews of war, security in an unfriendly world clearly cannot be provided by armaments alone. Implicit in an adequate program of national defense are measures to guarantee the necessary supplies of these strategic and critical materials. For the short run, reliance could be placed upon increased output of those commodities for which adequate productive facilities exist in this hemisphere, supplemented by the stockpiling of those obtainable in sufficient volume only from overseas. To continue, however, to depend on distant sources for the replenishment of exhaustible (and deteriorating) reserves would, in the kind of world here envisaged, be

³ These commodities are: coconut shell char, manganese, manila fiber, mica, quinine, rubber, silk, tin, and tungsten.

⁴ Aluminum, asbestos, hides, iodine, kapok, platinum, tanning materials, vanadium, wool.

hazardous in the extreme. It would be possible, over a period of time varying from one to several years, to provide for our requirements of all but six of the strategic and critical commodities⁵ within this hemisphere. This would necessitate increased production of some (manganese, mercury, tungsten) and the creation of western hemisphere sources of supply of two (manila fiber, quinine). With respect to rubber a combination of reclamation, synthetic production, and increased Latin-American output would be required, while our need for silk would have to be met largely by the rapid development of synthetic substitutes.

So long as the dark shadow of a Nazi victory looms as a possibility, considerations of national security would appear to justify undertaking such a long-range program of developing safe sources of raw materials. To fail to do so would subject us to the constant danger of international blackmail, of having to make fatal concessions to keep open our lines of supply. And since to a great extent this program depends upon the expansion of old or the development of new Latin-American resources, the problem of strategic materials merges insensibly into the broader problem of hemisphere defense.

A plan for hemisphere defense, indeed, comprises the third phase of the strategy of economic warfare which this country must employ if it is to survive in a totalitarian world. And such a plan is needed, not alone because of the part it plays in a long-run program of raw material security, but also for another independent and equally compelling reason. This is the danger, if the Nazi domination of Europe continues, of totalitarian trading methods leading first to economic penetration and then to political control of the countries to the south of us. If we would prevent the emergence of an American Balkans, where we would first lose our markets and critical supplies, ultimately perhaps our ability to defend ourselves, it is imperative that we lead, vigorously and promptly, in the erection of a united front of American nations, ready and able to repel all attempts at totalitarian domination.

Fortunately, much in this direction has already been accomplished. The Latin-American republics are well aware of the dangers inherent in totalitarian trading methods and are anxious to avoid them. The Havana Conference has already established machinery to deal with "fifth column" activities and the problem of European possessions, while the Inter-American Economic and Financial Advisory Committee is coming to grips with some of the concrete economic problems. Our own Department of Agriculture, which has conducted investigations into the prospects for the growing of crops supplementary to our own, is at the present time cooperating with various Latin-American governments in this direction. Moreover, Congress has added to the resources of the Export-Import Bank a half-

⁵ Chromium, mica, tin, cork, crystalline graphite, opium.

billion dollars to be used for the storage of surplus crops, the facilitation of inter-American trade, and the development of certain lines of production. Private and governmental efforts to expand inter-American travel are being earnestly made, in the expectation that much of the tourist traffic formerly going to Europe will instead be directed to Latin America. Success in this direction has begun with the reduction by one-third of rates for air travel, while the Inter-American Committee scheduled a maritime conference to consider the possible lowering of steamship rates on November 25, 1940. Serious efforts are being made to increase the degree of cultural interchange between the nations of the American continents. Recently a new, powerful, short-wave radio station in the United States (WLWO) added its strictly Latin-American broadcasts to the already expanding number of such programs. It is also gratifying to note that naval, military, and air missions from the United States have replaced European advisers throughout South America.

These numerous efforts, all to the good, indicate the will on our part to take effective leadership; on the part of our Latin-American neighbors a desire to co-operate in measures to our mutual advantage. The re-election of President Roosevelt also augurs well for this co-operation, since it is regarded a guarantee of continuity in our good neighbor policy.

Whilst the steps taken thus far constitute an excellent beginning, and exhibit both the desire and the ability of the American nations to work together, they are only a beginning. If inter-American co-operation is to reach the point where it is adequate to meet and withstand an economic blitzkrieg, it must be sufficiently embracing to enable the nations of the Western Hemisphere to confront the totalitarian powers on all vital issues as a single bargaining unit. The establishment of this united front would be the only effective guarantee of the retention by each member nation of its political independence.

This guarantee, and not any imaginary similarity in forms of government or cultural institutions, is the realistic basis for participation in a program of hemisphere defense. That it offers an important advantage is not to be gainsaid; yet it is inevitable that there will be certain offsetting disadvantages, especially to the Latin-American countries. If the program is to be carried to a successful conclusion, it is imperative that these offsetting disadvantages be kept to a minimum.

The reduction to the lowest possible degree of the disadvantages attendant upon economic union of the Americas is, indeed, the crux of the whole problem. Three dangers, which if realized would nullify the benefits of united action, may be distinguished. There is the political danger that German domination may be avoided only to substitute for it the domination of the United States. There is the military danger that economic strength may be attained to the accompaniment of weakness in arms, which in a

world where force alone is respected would be fatal. Finally, there is the economic danger that political independence may be safeguarded, but at so high a cost as to render it prohibitive.

Avoidance of the political danger to the Latin-American countries of exchanging totalitarian "protection" for American imperialism can be achieved if hemisphere defense is carried out as a co-operative venture. The entire merit of the scheme, in fact, rests upon the assumption that it is so conceived and will be so executed. Any attempt to compel participation is bound to be self-destructing; as a proposal to unite the strength of twenty-one republics, it has meaning only on a voluntary basis. Fortunately our government, being well aware of this fact, has no intention of departing from the principle of co-operative action. This principle, indeed, is at the bottom of our good neighbor policy.

The second danger—that of sacrificing military security to an excessive reliance upon economic strength—is being amply provided for. The rapid prosecution of our national defense program, including the establishment of bases at the newly acquired sites, should in the course of months enable us to undertake the protection of most of this hemisphere against foreign attack. Parallel preparations by Argentina and Brazil are already under way to guarantee the southern portion of South America.

It is in the economic danger of purchasing political independence at too high a cost that most of the difficulties of a plan of hemisphere defense are focused. For political sovereignty may be obtainable only by accepting as the price such mass unemployment, such economic disorganization, such a lowering of living standards, as to make the bargain an extremely bad one. These costs must be avoided, or at least reduced to a reasonable level, if the project is to be workable. Whether they can be so minimized depends upon the possibility of devising measures which will permit the continued functioning of a raw material economy which is severed from its normal markets. More concretely, the problem is to devise and put into operation measures which will reduce to manageable proportions the dependence of Latin America upon Europe as a buyer.

So stated, the problem of hemisphere defense is certainly a challenging, perhaps an insuperable, one. To judge its prospects, it is essential to consider with some care, first, the international economic position of the Latin-American countries; then the various means which have been suggested for coping with the difficulty which this presents. Let us take these up in turn.

Regarded broadly, the economy of the Central and South American states is essentially determined by the fact that this area, possessed of fertile soils and rich in minerals, is relatively sparsely populated. This makes impossible the development of mass-production manufacturing industries and guarantees an advantage to this area in the production of industrial raw materials and foodstuffs. These relatively crude goods find their prin-

cial markets in the great industrial centers of the world, chiefly western Europe and the eastern United States.

In the past few years, Europe has taken approximately half of the exports of Latin American countries and provided them with the same proportion of their imports. The United States accounts for about a third of their trade in both directions. As other recent studies have pointed out, however, overall figures such as these are rather misleading; a proper impression of the situation is only to be found by considering different regions separately. Thus the countries bordering the Caribbean, including Venezuela and Colombia, are in a category by themselves. Seven of these countries sell the United States from 60 to 90 per cent of their exports, while for four others (Dominican Republic, Haiti, Costa Rica, Colombia) the figure is 44 per cent (1938). Only Venezuela sends to us direct only a small proportion of her exports (13.2 per cent in 1938), though a considerable quantity of her petroleum in the form of fuel oil comes to us indirectly through the Netherlands West Indies.

Of the countries on the west coast of South America, the United States normally takes from one-fifth to two-fifths of their exports, while from 35 to 50 per cent go to European markets. It is the east coast of South America that is predominantly dependent on Europe for trade outlets, Brazil, Paraguay, and Uruguay usually sending some 50 per cent of their exports there, while in normal times Argentina ships upwards of 70 per cent of her export goods to Europe. Except for Brazil, of whose foreign sales we take ordinarily over a third, the United States is a relatively minor market for eastern South America.

The high degree of dependence of many Latin-American countries upon the industrial markets of Europe is clear. If Hitler wins the war, this dependence will be critical; for with an integrated Europe of 400 million buyers under his control, he can ensure affluence or impose penury upon entire nations merely by granting or withholding purchases. The southeastern nations of South America are in an especially acute position, owing to the fact that their economies are so largely complementary to that of Europe, competitive with that of the United States.

Long-run security for the Americas, so far at least as it rests upon economic factors, must be found in the direction of eliminating critical dependence upon European markets through the development of a largely self-sufficient Western Hemisphere. A more pressing problem, however, in the event of a Nazi victory, will be the creation of an agency or agencies which can effectively counteract the immense bargaining power of a Germanized Europe. And since that bargaining strength can be brought to bear with particular force upon the producers of large surpluses, this problem links up with the even more immediate issue of the disposal of existing surplus production. The order of urgency of hemisphere economic prob-

lems, in other words, is: first, disposal of current surpluses; second, establishment of a strong bargaining agency; third, reduction of American dependence upon Europe. Let us examine them in this order.

The immediate problem of surpluses is how to get rid of them among people who, as things now stand, cannot take them. To burn them is wasteful; to find new uses for them almost impossible. The only sensible solution is to enable some of those who would like part of the surplus products to get them. To a certain extent this is being accomplished automatically. The rise in the national income of the United States, together with the increasing requirements of the national defense program, has lifted our imports from Latin America during the first year of the war one-third above the level of the preceding year. Great Britain likewise, with the closing of certain sources of supply, is buying more heavily from South America. The impetus for increased Latin-American exports should continue at an accelerating rate; their volume could be further enlarged by 100 to 200 million dollars by our diverting purchases from non-American to American sources whenever possible. If implemented by clearing arrangements, a considerable further expansion of inter-American sales should be possible. Argentina needs petroleum, of which Mexico and Venezuela have an excess, while these countries are deficient in supplies of corn and beef, of which Argentina has a superabundance. Cuban sugar, Chilean copper and nitrates, Brazilian coffee, and Argentine wool are other products in which increased interchange would surely be mutually profitable, provided the universal foreign exchange difficulties could be evaded through the use of clearing agreements.⁶ It might not be too much to expect the United States to assist in the solution of the surplus problem by making certain concessions which, while they would injure certain vested interests, would be greatly to the advantage of the general public. We might, for example, permit the duty-free entry of Argentine beef up to 10 per cent of our normal consumption of approximately eight billion pounds, an act which would absorb three-fourths of Argentina's exports. More generous quotas for Cuban sugar would also be very much to the point. If we really mean business with respect to hemisphere defense, such acts of "sacrifice" on our part would be the most effective way of convincing the perhaps somewhat skeptical Latins.

Even our rising national income, increased purchases by Great Britain, and sales expanded by clearing deals or special concessions, taken together, would, however, in all probability fall considerably short of absorbing the current serious surpluses in beef, coffee, copper, corn, cotton, petroleum, and wheat. To dispose of the remainder, the only recourse would appear to be some form of relief distribution. Our own "food stamp plan" has

⁶ Perhaps the best solution of the foreign exchange problem is to be found in the use of some of our \$21 billions of gold to establish an inter-American gold standard. Resort to clearing agreements might even then still be necessary for such special deals as those considered here.

been eminently successful; its application to Latin America, while a good deal more complex, should prove equally beneficial to the producers of surpluses and to their recipients. It is interesting to note that this line of attack is currently being explored by the Inter-American Financial and Economic Advisory Committee.

Although the existing surpluses are the immediate consequence of the war blockade, its lifting with the cessation of hostilities will not, as we have seen, permit us to turn our backs upon them. For although on the assumption of a German victory a ready market will be available, it will in all probability be available only on dictated terms unless the bargaining strength of the Americas is united. To provide this necessary strength, the proposal which has received most prominence suggests the creation of a series of commodity agreements or marketing boards, one for each commodity of which there is a serious surplus.⁷ Such an agreement would include all Western Hemisphere countries producing an exportable surplus, would set a minimum price below which no foreign sale would be made, and allocate a share of sales to each participant in accordance with its percentage of production during a stipulated base period. To prevent the recurrent appearance of unmanageable surpluses, each commodity agreement would have to require crop restriction within each of the participating countries. The motive for each government to see that crop restriction was effective would be supplied by a provision that the benefits of united bargaining strength would be available only to those who traded exclusively through the commodity board. Production in excess of the quota would find no market unless a country chose to break away from the agreement. In this event, it would become an isolated and ultimately a helpless seller.

Although commodity agreements, loyally adhered to, would guarantee the receipt from foreign sales of a fair, or at least an acceptable, price in domestic currency, this gain could easily be nullified unless the scope of control were extended. For what is certain to concern most vitally each country participating in the commodity agreements is the barter terms of its trade. It would be of no especial benefit to secure a satisfactory dollar price for cotton if the German goods received in exchange were priced (in marks) at an exorbitant level or if the dollar price of marks were excessive. Moreover, not only might goods be high-priced, but it might also be necessary, as with some past victims of German trading methods, on occasion to take shiploads of harmonicas or cargos of aspirin. Protection in addition to that furnished by co-operative trading would then be necessary. Not only the price of the article sold but also the prices of the goods bought, as well as the price of the foreign currency involved, would have to be influenced in some fashion.

⁷ On this, see Clark Foreman and Joan Rauschenbush, *Total Defense*. This is the most comprehensive and vigorous discussion of hemisphere defense available. Its authors are strong advocates of such a program.

To meet the problem of the exchange rate, a hemisphere-wide exchange control would become obligatory. The bargaining power of the Americas would have to be brought to bear at this point quite as much as in the determination of the (domestic) selling price of each surplus commodity. Anything short of intercontinental exchange control would create the situation, with respect to European exchange in the independent countries, of several weak sellers confronting a monopolistic buyer—the very situation commodity agreements were supposed to counteract.

Moreover, if the exchange control were sufficiently wide in scope, it would furnish the means of ensuring that the third aspect of trading with a continental monopoly—the establishment of fair prices for the goods bought—would be effectively met. This end could *not* be achieved through exchange control as usually understood; namely, the compulsory surrender to the control authorities of all foreign exchange acquired, its disposal with respect to imports then being subject to their approval. Indeed, this familiar type of control was devised to meet the needs of nations suffering from seriously adverse balances of payments, a situation the very reverse of our own. We are confronted with the need for controlling the disposal of an export balance; not with the quantitative restriction of imports. A broader form of exchange control, empowering the exchange authorities to refuse the purchase of foreign currency as well as to regulate its sale, would meet both our own immediate requirements and those of a union of hemisphere bargaining strength. It would suit the latter in two ways. First, it would make it possible to veto the sale of American products until not only a fair price for the goods sold could be assured, but also a fair price for the correlative purchases. The establishment of a fair *quid pro quo* against a buying and selling monopoly is at stake. This necessitates control over both the *quid* and the *quo* either by the bargaining or other agency. Complete two-way exchange control ensures this, or at least makes it possible, without resort to the cumbersome device of an over-all cartel, with its extensive implications with respect to the regimentation of both domestic and foreign trade.⁸

But there is still a second manner in which a broad form of exchange control would fit the needs of hemisphere defense. It would make it possible effectively to counter a subtle and dangerous form of economic warfare. I refer to the exercise of pressure upon industries which would not be included in the commodity agreements. There are many lines of production, both in the United States and Latin America, which, while hardly necessitous sellers, would eagerly welcome foreign sales, especially under postwar conditions of depression. Producers in such industries might

⁸ The only practicable alternative would seem to be direct barter deals by each commodity board, a solution with obvious practical difficulties owing to the fact that the board acts for several countries. It also fails to meet the problem considered in the next paragraph.

be approached by Nazi agents with offers to take all production in excess of domestic sales, at a gratifying price—provided the firms in question brought pressure to bear upon government, newspapers, and employees to silence criticism of the Nazi regime and to support action favorable to it. Producers unwilling to do business on these terms would lose it to their less scrupulous and less patriotic competitors. Because of this possibility (which represents common Nazi practice and not fanciful imagination), not merely *surplus* products but *all* exports would have to be subjected to centralized control. To repel the trade war that will most certainly be waged, the stockade must be solid and continuous; to leave any gaps in it will invite infiltration.

Even though the most perfect and all-inclusive arrangements were made to guarantee fair barter terms of trade, they might fail for want of a bargaining partner. It takes two to make a trade, and the possibility must be reckoned with that Hitler might refuse to deal except with individual countries and therefore on his own terms and for his own ultimate political purposes. Might not a Germanized Europe be so strong economically that it could defy the American marketing arrangements and satisfy its requirements elsewhere, leaving this hemisphere the extreme burden of carrying its recurrently mounting surpluses? This might be possible, but it overlooks the fact that North and South America possess a tremendous economic leverage in being the principal sources of supply of many products of vital importance to Europe. Thus, of Europe's normal consumption of petroleum, some 65 per cent is imported, three-fourths of these imports coming from the Western Hemisphere. Seventy-five per cent of their copper requirements comes from the Americas; Africa, the only other large producer, will for long be unable to meet their needs. Nearly 90 per cent of the nickel Europe ordinarily consumes is derived from Canada; there are no very satisfactory substitutes. Of antimony, lead, and zinc, from 25 to 35 per cent of continental European consumption has been obtained here. Nearly 30 per cent of their annual needs for cattle hides are satisfied by Latin-American production, and are unobtainable elsewhere.

Of products which are less essential or for which substitution is more feasible, the following figures may be cited:

Wheat: 20 per cent of consumption from the Western Hemisphere, satisfying most of the European demand for hard wheat.

Flaxseed: 75 per cent of total imports, with only a small European production.

Wool: 75 per cent of consumption imported, one-fourth from the Western Hemisphere, one-half from Australia and New Zealand.

Cotton: 60 per cent of imports from the Western Hemisphere.

Coffee: 70 per cent of consumption from Western Hemisphere.

Tobacco: one-fourth to one-third of supplies from the Americas.

Quebracho: entire supply from Argentina and Paraguay.

A united bargaining agency established in this hemisphere would thus not be without high cards. Their value would also be enhanced after the war by the necessitous condition in which many areas of Europe would find themselves. Moreover, Europe's position vis-à-vis the Western Hemisphere is not similar. She is the source of almost no essential raw materials or foodstuffs, but rather is the supplier of manufactured goods. Practically all of the more important of these could be supplied in quantity by the United States, in particular if our normal European markets were cut off. Union of the economic strength of the American countries would give them a bargaining position of great strength, for it would enable them to refuse tempting but only temporarily attractive bargain offers for the sake of preserving their economic and political independence.

So far only the most pressing hemisphere economic problems have been examined, together with possible ways of meeting them. Disposal of existing surpluses would meet an immediate difficulty, while the establishment of a strong bargaining agency would provide that as surpluses recurred they would be sold to the best possible advantage. Neither solution, even if successful, would do anything to reduce the underlying weakness of Latin America—its dependence upon European markets. Surpluses would constantly reappear, increasing in magnitude and difficulty as Europe recovered from wartime disorganization, sought supplies elsewhere than in the Americas, and turned increasingly to substitutes. A high degree of economic independence for the Americas—an essential for the long run in a totalitarian world—cannot be achieved by sole recourse to such superficial measures. The solution of this problem in any full and lasting sense implies resort to more fundamental measures, which can operate only gradually, first to supplement, then in large part to supplant the short-run operations of the bargaining provisions.

In its essentials, this longer-run task is the fostering of Latin-American production in lines which are complementary to rather than competitive with those in other American countries, in particular the United States. Considering only some nine commodities in which the prospects appear most hopeful—namely, fibers; nuts, waxes, and oils; rubber; cacao; mandioca flour; barley malt and hops; and certain nonferrous metals—transfer of present United States purchases from the Orient and elsewhere to Latin America would permit the expansion of output of these products by a minimum amount of 150 million dollars.⁹ If we added to this list such items as iron ore, tin, mercury, platinum, quebracho, quinine, hardwoods, and iodine, the increase at a conservative estimate would be two or three times this sum annually.

The possibility also exists, and should be actively pursued, of stimulating

⁹ In the case of rubber, current plans to increase rubber production in Brazil to 10 per cent of our present requirements are considered.

increased manufactures, especially in Argentina, southern Brazil, and Mexico, where conditions are most suited to this type of production.¹⁰ Considerable possibilities exist in these countries of undertaking the production of certain kinds of consumers goods for their own and other Latin-American markets, notably in textiles, paper manufactures, and ceramics—goods which have hitherto been obtained chiefly from Europe.

Intensive and purposeful pursuit of the objective of transferring resources out of surplus-producing industries into lines of production for which American markets are available would go far toward creating an integrated, self-sufficient hemisphere economy. Only the successful attainment of such a long-range program would permit the American nations to face the "new world order" of totalitarianism in confidence and security. In terms of natural resources, climate, and labor supply, the possibilities of such development are present. What is at present lacking is the technical competence for carrying such a program through, and the daring and initiative to undertake it. Certainly this nation is not lacking in technical expertness, nor would it be beyond our powers to furnish the capital required. For with the cessation of the present warfare, if not before, the current huge expenditures on national defense will cease or greatly diminish. Idle productive capacity, capable of producing the tractors, trucks, road-building machinery, locomotives, rails, power-plant and industrial equipment needed in Latin America, will then become available. If not used for this purpose, they will in all probability lie idle, presenting us again with the tragic problem of mass unemployment. Under the world conditions assumed to hold after the war, what could be more to our interest than to make the very equipment Latin America will need to carry out the economic reorganization necessary to preserve their and our independence and security?

Undeniably the physical plant and the labor necessary to a program of hemisphere investment would be available. But what of the finances required? Capital equipment must be paid for, and additional funds are necessary to install and operate it. These funds, or the major portion of them, could only be supplied by the United States. But in view of the facts, first, that savings, at recent levels of national income, have run in the neighborhood of 14 billion dollars per annum, and, second, that only a small portion of them have been required in private industry, the potential funds for investment would be available. The question is, could they be made available for use in Latin America? It is relevant to note that if they were not directed into Latin-American investment, they would have to be devoted, as in the past few years, to absorbing a government deficit at home, unless a new era of industrial expansion opens up in this country with the coming of peace. To put it very mildly, this seems most unlikely, under

¹⁰ As suggested by Señor Davila, in Report No. 4 of Subcommittee II of the Inter-American Financial and Economic Advisory Committee.

the assumption that the American economic system will face a threatening enemy bent on its destruction. No, under such conditions, Latin America (and to a lesser extent Canada) will present us with an urgently needed undeveloped frontier region, capable of absorbing several billions of dollars a year of employment-creating investment. If we do not possess the ingenuity to devise technical means of putting our savings to this work, we will in all probability have to witness the development of Central and South America taken over by Hitler's enterprising young men.¹¹

Certain minimum conditions must of course be met. These proposed investments must not be gifts, but must be used to create productive enterprises. This means that careful exploration of the many prospective outlets be undertaken by technical and industrial experts, whose advice must be followed. All loans should be made conditional upon adherence to the collective trading system agreed upon. They must be used to develop Latin America and to raise standards of living there; not merely to enrich American financiers. All funds must be blocked by the exchange control authorities for expenditure solely within this hemisphere. Finally, to ensure intelligent co-ordination of its various parts, the whole project will have to come under the supervision of a central development board, comprising the ablest industrial, economic, and financial experts in the hemisphere.

The possibility that the facts of geography may prove inconsistent with the creation of an economically self-contained hemisphere must, of course, be reckoned with. This consideration arises principally with respect to the southernmost portion of South America, as has already been indicated, and involves mainly Argentina, to a somewhat less extent Chile, and parts of Brazil. It is here that climate, natural resources, and to a certain degree the nature of the labor supply create an economy that most resembles that of large portions of the United States. The products which these regions produce most economically—beef, wheat, corn, copper, and cotton—are what also give us our surplus headaches. It is quite possible that after all possibilities of transferring resources into the production of raw materials needed by our industries had been exploited, and after the development of consumers goods industries to supply South American markets had been pushed to the limit, a considerable amount of unemployment would remain. Only a careful and exhaustive study of existing production and of economically feasible alternatives could give a definitive answer. If the economy of these regions proves incapable of becoming independent of Europe, it would be necessary to limit hemisphere co-operation to the Caribbean and

¹¹ Possibly debentures of the Inter-American Bank, with interest guaranteed by the government of each country on the subscriptions of its citizens, would meet the problem. In any event, past methods of private financing could not be relied upon. Our huge gold reserve could also be put to good use in this connection, part of it being devoted to providing the basis for mobilizing credit resources in the Latin-American countries. The creation of a unified Western Hemisphere currency system could also be thus achieved.

the tropical and semitropical portions of South America, whose production either is or could be made complementary to that of the United States.

The southernmost regions of South America would then remain economic dependencies of Europe, and would therefore become its political dependencies as well. Such a situation would raise serious complications. For if Argentina was lost to Nazi political domination, the establishment of this ideology in the strongest nation of the continent would provide a working base from which to penetrate neighboring countries. While military defense of the continental United States, the Caribbean area, and South America to the "bulge" of Brazil might be feasible, it is most doubtful if its political defense would be possible if the totalitarian system gained a foothold in one of the leading nations of this hemisphere. With no single government in the Americas owing allegiance to Hitler, it has yet proved most difficult to prevent the infiltration of Nazi ideology through the efforts of diplomatic and consular staffs, business emissaries, and "tourists." If the strongest country in the southern continent were won over to totalitarian doctrines, it would act as the focal point of infection for the rapid spread of the disease. For our own protection, we would in all probability feel forced to take vigorous steps to ensure that Nazism did not spread to those countries included in our minimum defense area. Can anyone doubt that this would mean naked imperialism?

Considerations such as these indicate the extreme importance of exploring every avenue which will make possible the reduction of the dependence of the ABC countries on Europe. A thorough study of this particular aspect of the problem of hemisphere defense is urgently needed. And even though the difficulties might seem excessive, it is still possible that rather than face the almost certain loss of their independence, these countries might be willing to make the necessary effort, were we ready to provide reasonable assistance. After all, Chile went unaided through an almost impossible readjustment during the past twenty years, owing to the loss of her nitrate markets. Moreover, events often have a way of failing to develop as we had expected; it may be that merely by playing for time, "something," as Mr. Micawber said, "will turn up."

Finally, a few words in closing need to be devoted to considering where the pursuit of an elaborate program of hemisphere defense is going to leave us if the assumption upon which it is reared—a Nazi victory—fails to materialize. Clearly, if the British win, then just to the extent to which hemisphere self-sufficiency has been attained, by the reduction of western surpluses (of beef, wheat, corn, etc.), the problem of eastern surpluses (of rubber, hemp, quinine, tin, tungsten, etc.) will be intensified. Moreover, destruction of the Nazi menace would probably mean a return to a relatively free trading system rather than the continuation of rigid controls as an enduring feature of international commerce. If so, we would doubtless

find it more economical to supply our requirements of rubber, tin, and other materials in the Far East, as heretofore, and would be anxious to break loose from our South American commitments.

This is by no means a pretty picture, but unless the war is of several years' duration, it is unlikely that production in Latin America of materials we now secure overseas will be very far advanced. Two obstacles at least would seem certain to limit progress in that transfer of resources which constitutes the long-run aspect of a hemisphere defense program. One is the technical difficulty of increasing output quickly, which is markedly serious in the case of rubber; only slightly less so in the case of many other products. Closely related is the fact that to establish any large productive enterprise, starting from scratch and with considerable investigational and preparatory work to be done, takes time. The second obstacle to a rapid reorientation of Latin-American industries consists in the fact that the capital equipment that would be required is only to be found in the United States, and that while the war lasts, most of our capital goods industries are likely to be fully occupied in meeting the joint requirements of the British war effort and our own national defense program. There will be relatively little to spare for investment in Latin America. Therefore it seems almost certain that for the foreseeable future the hemisphere defense program is going to have to be limited chiefly to short-run measures capable of alleviating the economic situation in the Latin-American countries, to the creation of some effective trading agency which can commence operations immediately in the event of Nazi victory, and to investigating and planning for the longer-range investment program. Doubtless some progress can and will be made in the latter field, especially in those lines of production which can most quickly be established. We should also do all in our power to foster, by financial or other means, those reorientations of production which will be desirable whatever the outcome of the war for the sake of making the economies of certain Latin-American nations more diversified and better balanced. But the major effort in this direction will have to wait until our energies are freed from their present preoccupation.

Does the fact that large-scale progress in Latin-American economic development must be postponed mean that the plan should therefore be scrapped? By no means, either from the point of view of Latin Americans or from ours. For short-run palliatives can be very helpful; some progress can be made with concrete investment, and careful plans made for its immediate and vigorous expansion as soon as possible and necessary. Moreover, a well-rounded program of hemisphere defense, with each phase ready to be put into operation as soon as it is required, provides the best form of insurance against a British defeat. To fail to adopt this obvious protection would be foolhardy, considering the risks with which we may be faced.

Nonetheless, it is by no means the only strategy left open to us, nor is it the one best designed to promote most immediately and directly our national interests. It would seem axiomatic that it is always better for a nation to influence the course of world developments in a direction harmonious with the national interest than passively to await those developments; then make the necessary adjustments to them. In terms of present realities, it appears equally patent that the establishment of a totalitarian world order would put our institutions, our way of life, our very independence as a nation, in the gravest danger. To concentrate solely upon building up our armed forces and upon preparations for hemisphere co-operation would be to make ready to isolate ourselves in the west. It is a policy which concedes the probability of an Axis victory and prepares to make the best of it. It is also a very costly policy. The direct and indirect economic costs of bringing about a large-scale reorganization not only of the economies of Latin America but of our own as well would be great. Much capital must be scrapped, much training sacrificed, and many raw materials obtained from less productive sources. The outlay necessary to build up and maintain a military establishment adequate to the new conditions is staggering. Moreover, the broader social costs resulting from the militarization of our lives, from the regimentation necessary to the economic reorientation of two continents and to a policy of hemisphere isolation, are even less pleasant. So long, however, as Britain fights on with even a remote chance of success, it is open to us to follow a policy which is positive rather than passive—which if successful will make unnecessary the difficult and costly readjustments imposed by a threatening "new world order." Such a policy is the continuation and the intensification of aid to Britain. By unstinting support of her valiant efforts, her victory may well be assured. This is and should remain our primary objective. It is our first line of defense. Hemisphere co-operation, while essential as a second line, *is* secondary. Its preparation must go ahead, rapidly if possible, but not at the expense of Britain's cause.

SOME ASPECTS OF OUR FOREIGN ECONOMIC POLICY

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The subject which is under discussion should be considered from two broad points of view. It is necessary to examine, first, the position of the United States in the present-day world economy; and, secondly, the position of this country with respect to the world economy which is, and will be for some time ahead, in the making.

Both of these aspects of the subject before us are dominated by the existence of widespread and still spreading war. We are in the presence of an armed conflict which not only has suddenly disrupted and distorted pre-existent economic relations and conditions, but which is bound to leave a profound imprint on the world economy of the postwar period. Its effects are felt and will be felt for a long time to come by all nations, irrespective of whether or not they are directly involved in the conflict itself.

I propose, accordingly, to describe briefly the impact of more than a year of war upon the international economic relations of the United States. I propose, next, to deal with some basic factors of the outlook for the future, in so far as it is discernible at this time.

I

The most important element in this country's economic relations with the rest of the world is foreign trade. In this field, significant changes have occurred during the war period.

The total values of both our exports and our imports have shown marked increases since the outbreak of war in Europe. Exports rose from 2,941 million dollars in September-August, 1938-39, to 4,016 millions in the corresponding period of 1939-40; and general imports, from 2,132 millions to 2,625 millions. However, these global figures conceal important changes in the direction and commodity composition of our foreign trade.

As regards exports the period has been one of steadily contracting markets in some parts of the world and steadily expanding ones in other parts. From the outbreak of the war, because of the naval blockade measures taken by the Allied powers, Germany and the territories formerly comprising Austria, Czechoslovakia, and most of Poland practically disappeared as direct markets for our goods. Starting last spring, a number of European countries, as they became engulfed in rapid succession by German occupation, ceased to be markets for American products. This was the experience of Denmark, Norway, the Netherlands, Belgium, and France. With Italy's entry into the war, our exports to the countries of southern and southeastern Europe have either disappeared or have become greatly reduced.

Today, virtually the entire continent of Europe west of the Soviet Union, as well as some parts of Africa and the Near East, are cut off from the channels of sea-borne trade by the far-flung nature of the British naval blockade. On the other hand, there has been a great expansion of our exports to the United Kingdom, Canada, and the other parts of the British Empire, as well as a substantial increase of sales to Latin America and the Far East. The British countries alone accounted for over 50 per cent of the billion-dollar increase which occurred in our exports during the first year of the European war.

More than half of the increase of exports was caused by rapidly mounting sales of finished manufactures, reflecting mainly the growing demand for aircraft and other implements of war. More than one-third represented semimanufactures. Crude materials showed a substantial rise. The largest single increase occurred in the exports of iron and steel-mill products. On the other hand, there was a marked decline in our exports of tobacco and of various types of foodstuffs, with the consequent growth of accumulated stocks of these commodities.

Our imports have increased much less than our exports. Here, again, the exigencies of war have played a decisive role. Blockade measures affect the exports of the blockaded countries, as well as their imports. The British productive effort has been more and more directed toward war output. These factors have necessarily retarded our imports of finished manufactures. On the other hand, the expansion of our domestic industrial activity has been reflected in increased imports of raw materials. Moreover, with the emphasis in our domestic economy shifting to production for defense, the importation of certain strategic raw materials is being stimulated.

The fact that during the first year of war in Europe our exports expanded by over a billion dollars and our imports by less than 500 millions resulted in a substantial increase of the already large export surplus in our balance of trade. This export surplus amounted to 1,391 million dollars in September-August, 1939-40, as compared with 809 millions in the corresponding period of 1938-39.

The export surplus was offset mainly by importation of gold, which has been coming into the country at a more rapid pace than ever. During the twelve months preceding the outbreak of war in Europe, our net imports of gold were 4,061 million dollars; during the twelve months immediately following the outbreak of war, they were 4,632 millions.

The gold imports came in, of course, in response to other stimuli, as well as the need to pay for purchases of American products. Considering the fact that several of the belligerent countries have been selling some of their American investments, and taking into account other items in our balance of international payments, it is clear that only a relatively small

part of the gold shipments has been used for the purpose of paying for goods already purchased. A far greater part came either in search of safety or in preparation for future payments.

Although most of this vast inflow of gold has come from monetary reserves rather than from new production, the war has not so far produced disordered foreign exchanges. This has been so principally because of the existence of stringent exchange control in the United Kingdom and the other British countries and because of the virtual disappearance of trade between the continent of Europe and the rest of the world. On the other hand, the growing severity of exchange control, in the countries directly involved in war as well as in many countries not directly involved, has had serious effects on our trade. From the point of view of our policy in this field, the outstanding development has been the decision to place under license the funds belonging to several European countries which have been overrun in the course of present hostilities.

The increased exports from the United States have been financed without recourse to new loans. Credits have been extended to several South American countries and some direct investment has taken place there. Small loans have been made to the Scandinavian countries. Some credits have been furnished to China. The total amount, however, has been very small. Under the operation of the Johnson Act, no loans have been made to any of the principal belligerents. Under the Neutrality Act, purchases of war supplies have been on a cash basis.

The operation of the Neutrality Act, as revised shortly after the outbreak of war in Europe, combined with the general effect of war conditions, has had important repercussions upon our shipping situation. Our merchant marine has practically ceased its trans-Atlantic service. Shipments to Europe now take place predominantly under the British flag, and this has resulted in diversion of much of the British and other shipping from their accustomed trade routes. Although our ships have found new opportunities in the Western Hemisphere and elsewhere, our sea-borne commerce experiences many shipping difficulties. As regards the Western Hemisphere, an Inter-American Maritime Conference was recently held in an attempt to find solutions for certain of these difficulties.

II

Broadly speaking, the foreign economic policy of the United States since the outbreak of war in Europe has been directed toward two main objectives: first, to cushion the impact of war conditions on our domestic economy, in so far as it is affected by international factors; and second, to facilitate the program of national defense which has been rendered imperative by developments abroad. These objectives have been pursued in relation to each other, as well as in relation to other basic policies. Their pursuit has

resulted in measures with respect to both exports and imports, some of which have promoted and some of which have necessarily retarded our foreign commerce.

As regards exports, the first point to be noted concerns the implications and effects of the Neutrality Act, as revised in November, 1939. The "cash-and-carry" provision of that Act, adopted as a means of reducing the risks of this country's involvement in war, has probably had a retarding influence on our export trade. On the other hand, the elimination of the rigid arms embargo, which constituted the principal feature of the November revision, has rendered possible the exportation of certain important war supplies. These exports have not only helped to sustain our total foreign sales on a high and rising level, but have enabled us to implement the policy of rendering all practicable material assistance to countries which are victims of attack. At the same time, they have been instrumental in building up specialized productive capacity in this country essential to the creation of the instrumentalities of national defense.

Next, with respect to exports, mention should be made of the repeated and persistent efforts on the part of the government to mitigate in the interest of our commerce the severity of wartime trade controls. While recognizing, of course, that decision as to the operation of such controls, both as regards blockade measures and as regards the choice of commodities permitted to be imported, must necessarily rest with the belligerents imposing them, the government has sought, through formal and informal negotiations and with a substantial measure of success, to secure the application of these measures in a reasonable manner. In this respect, the existence of trade agreements, especially those with the United Kingdom and Canada, has served an extremely useful purpose. This was also true with respect to France, prior to that country's military collapse.

An interesting feature of our recent export policy has been the abandonment, shortly after the outbreak of the war, of export subsidies on cotton and, more recently, of such subsidies on wheat flour shipped to certain parts of the Far East. War conditions have rendered no longer operative most of the considerations which originally led to the adoption of these measures.

The most striking feature of our export policy during the war period has been the adoption of a far-reaching system of export control as an element of the national defense program. By an act of Congress, approved July 2, 1940, broad powers were vested in the President to place under license the exportation of various strategic and other essential commodities. By proclamation dated July 2, the President prohibited the exportation of a number of specified articles and materials, except when authorized by licenses issued by the Secretary of State. The licensing actually began on July 5, under a procedure closely resembling that used during the World War by the War Trade Board.

The list of commodities for which export licenses are required has been expanded several times. As of the middle of November, it comprised such important basic materials as aluminum, many petroleum products, iron and steel scrap, several nonferrous metals, mica, graphite, mercury, and others. It included aircraft and aircraft engines, as well as plans and specifications for aircraft and engines; various types of machine tools; equipment and specifications for the production of aviation motor fuel; all arms, ammunition, and implements of war as defined by the Presidential proclamation of May 1, 1937; and many other articles.

All interested departments and agencies of the government take part in the formulation of policies with respect to the application of export control. These include the Departments of State, Treasury, Commerce, and Agriculture; the Army and Navy Munitions Board; the Advisory Commission to the Council on National Defense; and the Maritime Commission. In the administration of control, the basic criteria are the interests of national defense, broadly interpreted to include continental defense and material aid to Great Britain and other victims of attack. Accordingly, licenses are usually issued more liberally for exportation to the countries of the Western Hemisphere and to the United Kingdom than to other parts of the world.

As regards imports, the appropriate agencies of the government have been watching carefully the effects of war conditions upon the importation into this country of competitive commodities. In only one instance thus far a special arrangement had to be made; namely, a supplementary trade agreement with Canada, regulating the importation of silver fox furs.

Activity on the part of the government has been necessary to insure delivery of some commodities essential to American industry, the obtaining of which has been rendered difficult by the operation of naval blockades. Examples of this are found in cases of graphite, mica, mercury, and other materials.

The outstanding government activity in the field of imports has been in connection with national defense. As a part of the defense program, vigorous action has been taken to build up stock-piles of what the Army and Navy Munitions Board has designated as strategic and critical materials. A part of the funds appropriated for national defense is being used for this purpose. By special Congressional authorization, the Reconstruction Finance Corporation is also engaged in financing the importation of stocks of essential industrial materials. Stock-piles of tin and other ferro-alloys, of rubber, and various other commodities are rapidly accumulating.

Another aspect of the national defense program relating to the import problem consists of efforts to find "new sources close enough to this country so that there may be reasonable expectation that access to them will not be disrupted." This relates primarily to the Western Hemisphere and is a factor of some importance in inter-American economic relations.

III

Inter-American economic relations occupy a special place and loom large today in the foreign economic policy of the United States. They are an important part of the "Good Neighbor" program for the Western Hemisphere, which is one of the foundation stones of the entire structure of this country's foreign policy and one of the essential features of the national defense effort.

The basic conception of inter-American relations on which this country proceeds is simple. The twenty-one American republics have in common certain interests and certain aspirations. Although removed geographically and historically from the conflicts and controversies which are in progress on the other sides of the Atlantic and the Pacific oceans, the American nations, in view of the character and implications of the wars now going on in Europe and in Asia, have a common and overriding interest in ensuring their own security and, if possible, preventing war from reaching their shores. To this end, they must, by common effort, create impregnable means of national and continental defense. Confronted with the present-day challenge to the right of nations to independence and to freedom from intervention in their domestic affairs, the American nations are conscious of the imperative need for individual and common action directed toward the preservation of their enjoyment of that fundamental right.

At the same time, neither the United States nor the other nations of the Western Hemisphere have any desire to isolate themselves from the rest of the world and concentrate their efforts on building up a system based on the concept of national or regional self-containment. They are a part of the world, and their own present and future are inextricably bound up with what happens in the other important areas of the earth. Both from the short-run and the long-run points of view, they have always been, and they are today, vitally interested in the kind of world mankind is to live in, and in making their contribution toward helping to shape relations among all nations along the lines of peace and progress.

Successful effort in all these directions requires political stability and economic strength within the American nations, and political solidarity and economic co-operation among them. The creation and constant reinforcement of such solidarity and co-operation have been the keynotes of numerous inter-American conferences and of continuous effort through diplomatic, commercial, cultural, and other channels.

In the economic field, a program of co-operative inter-American action to meet the impact of war conditions was inaugurated in September, 1939, at the first Consultative Meeting of Ministers of Foreign Affairs of the American Republics, held at Panama. At that meeting, it was resolved that:

In view of the present circumstances, . . . it is more desirable and necessary than ever to establish a close and sincere co-operation between the American Republics in order that they may protect their economic and financial structures, maintain their fiscal equilibrium, safeguard the stability of their currencies, promote and expand their industries, intensify their agriculture, and develop their commerce.

To this end, it was decided:

To create an Inter-American Financial and Economic Advisory Committee consisting of twenty-one experts in economic problems, one for each of the American republics.

The Committee was duly constituted a few weeks later, and it has been meeting in Washington ever since.

As time went on and as the economic repercussions of war both on the present and on the future became intensified, the obvious need for more and more vigorous inter-American action led to a comprehensive review of the whole problem at the second meeting of the American Ministers of Foreign Affairs at Havana in July of this year. The conclusions reached there were summed up in a resolution on economic co-operation, in the "whereas" part of which it was stated that:

The war now in progress has increased the disruption in the channels of international commerce and the curtailment of markets for certain products of the Americas; the existence of surpluses of commodities, the exportation of which is essential to the economic life of the countries of the Americas, is economically, socially, financially, and in other respects a matter of great importance to the masses of the population and . . . to the Governments of the entire Continent; it must be anticipated that these difficulties will exist as long as the war continues and that some of them, as well as other new ones, will exist after the war ends; and it is of great importance that the economic development of the American countries be directed towards a diversification of their production and, at the same time, towards an increase in their consumption capacity.

The short-run and the long-run objectives of inter-American economic policy were stated as follows in the substantive part of the resolution:

The Second Meeting of the Ministers of Foreign Affairs of the American Republics
RESOLVES:

One. To declare:

(a) That the American nations continue to adhere to the liberal principles of international trade, conducted with peaceful motives and based upon equality of treatment and fair and equitable practices;

(b) That it is the purpose of the American nations to apply these principles in their relations with each other as fully as present circumstances permit;

(c) That the American nations should be prepared to resume the conduct of trade with the entire world in accordance with these principles as soon as the non-American nations are prepared to do likewise;

(d) That, in the meantime, the American nations shall do everything in their power to strengthen their own economic position; to improve further the trade and other economic relations between and among themselves; and to devise and apply appropriate means of effective action to cope with the difficulties, disadvantages and dangers arising from the present disturbed and dislocated world conditions; and

(e) That the American nations consider it necessary to maintain or improve the normal economic situation established between them in order to assure the preservation or improvement of the position enjoyed in their respective markets.

Two. To strengthen and expand the activities of the Inter-American Financial and Economic Advisory Committee as the instrument for continuing consultation among the American Republics with respect to economic and trade matters and arrangements, having in mind especially the immediate situations which must be met as a result of the curtailment and changed character of important foreign markets. . . .

Three. Specifically, to instruct the said Committee that it proceed forthwith:

(a) To co-operate with each country of this continent in the study of possible meas-

ures for the increase of the domestic consumption of its own exportable surpluses of those commodities which are of primary importance to the maintenance of the economic life of such countries;

(b) To propose to the American nations immediate measures and arrangements of mutual benefit tending to increase trade among them without injury to the interests of their respective producers, for the purpose of providing increased markets for such products and of expanding their consumption;

(c) To create instruments of inter-American co-operation for the temporary storing, financing and handling of any such commodities and for their orderly and systematic marketing, having in mind the normal conditions of production and distribution thereof;

(d) To develop commodity arrangements with a view to assuring equitable terms of trade for both producers and consumers of the commodities concerned;

(e) To recommend methods for improving the standard of living of the peoples of the Americas, including public health and nutrition measures;

(f) To establish appropriate organizations for the distribution of a part of the surplus of any such commodity, as a humanitarian and social relief measure;

(g) To consider, while these plans and measures are being developed, the desirability of a broader system of inter-American co-operative organization in trade and industrial matters, and to propose credit measures and other measures of assistance which may be immediately necessary in the fields of economics, finance, money, and foreign exchange.

The comprehensive program of economic action embodied in the Havana resolution was, in large measure, the result of proposals made by the government of the United States. In placing these proposals before the meeting, Secretary Hull said:

The Government of the United States of America has already utilized its existing agencies to enter into mutually advantageous co-operative arrangements with a number of American Republics in connection with programs for the development of their national economies and by way of assistance to their central banks in monetary and foreign exchange matters. It is now taking steps which will make possible the extension of both the volume and character of the operations of such agencies. When these steps have been completed, the Government of the United States of America will be in a position to expand its co-operative efforts with other American nations in the fields of long-term development and of monetary and exchange matters. It will also be able to participate in immediate joint action with other nations of this Hemisphere to meet pressing trade situations which may arise before the program outlined has come into operation. Finally, it will be enabled to enter effectively into the co-operative program as it proceeds, assisting in the temporary handling and orderly marketing of the important commodities of the Hemisphere; implementing, on its part, the commodity agreements which are developed; and carrying out other operations involving such export products.

Several of the steps to which Mr. Hull referred have since been taken. The Congress has increased by 500 millions the funds at the disposal of the Export-Import Bank, these new funds to be used for inter-American economic operations, "to assist in the development of the resources, the stabilization of the economies, and the orderly marketing of the products of the countries of the Western Hemisphere." The Bank is now working on specific proposals and requests coming from various American countries. It has already entered into a number of transactions, notable among which has been the extension of credit for financing a steel-mill project in Brazil and the provision of a general credit to Argentina. Conversations between the United States Treasury and other appropriate agencies of the government, on the one hand, and representatives of several American countries, on the other, are in progress with respect to financial, monetary, and foreign exchange matters. Steps have been taken to increase purchases of strategic materials.

In order to promote the government's activities in the field of inter-American relations, the President has set up, under the Council of National Defense, an Office for Co-ordination of Commercial and Cultural Relations between the American Republics. This Office is engaged in intensive study of the problems involved and in correlating and stimulating action on the part of the appropriate operating agencies of the government.

The government is taking an active part in the work of the Inter-American Financial and Economic Advisory Committee. The presence in Washington of competent economic experts of all of the American republics makes for speedier and more effective discussion of specific questions and problems. The Committee has prepared the statute of an Inter-American Bank, which now awaits ratification by the several countries. It has created an Inter-American Development Commission, with official and business participation, as an agency for long-range economic development in the various American countries. It has set up special groups to study individual export commodities with the view to recommending to the governments measures to be taken with respect to the handling of such commodities. The furthest advanced of these studies relates to coffee, a concrete marketing agreement with regard to which is now pending before the fifteen governments concerned. Action with respect to corn has also received extended consideration. Vigorous attention has been given to other phases of the Havana program.

IV

The foregoing is, in its salient features, the story of the effects to date of war in Europe on the principal elements of this country's economic relations with the world and of the foreign economic policies pursued by the government of the United States in the light of these developments. From the policy point of view, it is a story of adaptation to conditions some of which are in large measure outside our control; of effective utilization of available instruments of action in defense of the national interest; and of the forging of new tools to cope with new and extraordinary conditions.

Since no one can foretell when the present war will end, this country is bound to be confronted, for a period of unpredictable duration, with the continued operation, possibly in an increasingly aggravated form, of some of the factors which have thus far influenced its foreign economic relations. It will also, in all probability, be confronted with the rise of new factors. As we look ahead, therefore, it is well to envisage some of the more important of these possibilities and probabilities.

So long as the British naval blockade measures continue to function, they must necessarily continue to have a dominant influence upon our exports to the continent of Europe and to areas adjacent to Europe. Under these circumstances, it is to be anticipated that our shipments to virtually the

entire continental portion of Europe will remain on an extremely low level. On the other hand, British requirements for our products are likely to expand still further.

In connection with Great Britain's purchases of war supplies in this country, the question has already arisen with regard to payment for such purchases. As the war progresses, Great Britain is confronted with a double shrinkage of her dollar exchange resources, resulting from the using up of her accumulated reserves of gold and of dollar securities and from a possible decline of exports to this country. Accordingly, as the President announced on December 17, plans are being worked out under which we would, in our own best national interest, extend appropriate aid to Great Britain in financing her war requirements.

Such action is of obvious and pressing importance in implementing effectively our established policy of giving all possible material aid to Great Britain and of creating, at the same time, in our own country maximum productive capacity in the specialized fields of military supplies. It is also important from a longer-run point of view. In considering, as we must, the problem of the future reconstruction process, it is necessary for us to take serious account of the great difficulties which might arise in that respect if Great Britain's international financial resources should become depleted in the conduct of the war.

As our national defense program gains momentum, it is to be anticipated that there will be increased emphasis on purchases of essential commodities, especially on the government account, and probably an extension of the already existing system of export control. The continuation and possible intensification of war are bound to produce greater uncertainty with regard to the accessibility of some important sources of supply of many essential materials. This will dictate the need of rapid and vigorous action toward increasing our reserves of such commodities. Conservation of these reserves as well as of the domestic production of some essential raw materials may dictate the need of placing more commodities on the export control lists. The extension of these lists may also result from a growing absorption of our industrial capacity into the military preparedness effort.

While some of our exportable commodities are thus being, and more may be later, placed on a license or even embargo basis because they are needed at home, the exigencies of war trade conditions are bound to create increasing difficulties with respect to certain other exportable commodities, especially in agriculture. As I have indicated, the sixteen months of war have already resulted in abnormal accumulations of unsalable surpluses of many of our important exportable farm products. The prospect ahead, so long as war conditions continue to exist, is one of further accumulations or of curtailed production—in neither case a desirable alternative. To some extent, the difficulty will be lessened by increased domestic

consumption resulting from expansion of general business activity, caused, in turn, partly by the increased exports of war supplies. But the handling of our agricultural problem growing out of wartime loss of important foreign markets will still represent a formidable task.

The problem of exportable surpluses cut off from their normal outlets is one which we have in common, and will continue to have in common, with our neighbors to the south of us. For them, the problem is even more important and far more acute than it is for us. While some of the American republics are more, and some are less, dependent on overseas markets, all of them taken together normally ship to Europe about one-half of their total exports. Our normal sales to Europe are also approximately 50 per cent of our total exports. But in our case, because of the great variety of our exports, loss of foreign markets for some commodities may be compensated for, in the aggregate, by increased exports of other commodities, as has recently been the case. The exports of the other American republics are highly concentrated, in the case of some countries consisting overwhelmingly of only one or two products. In our case, because of our ample financial resources, even a diminution of total exports does not mean inevitably an immediate loss of necessary imports. In the cases of the other American countries, unless they can borrow, loss of exports does mean an immediate and often disastrous loss of badly needed imports. Being debtor countries, loss of imports means to them increased difficulty in meeting their foreign obligations. Being financially poor countries, it means, in varying degrees, grave internal difficulties.

Aid to the other American countries which would enable them to meet the hardships caused by the already existing and prospective accumulations of unsalable surpluses resulting from the exigencies of war conditions is an important element in our immediate program of inter-American economic relations. The availability or non-availability of such aid may in some instances spell the difference between domestic stability and instability, which is obviously a matter of great concern to us. Aid of this sort may take the form of loans to individual countries which would enable them, by thus supplementing their own financial resources, to handle their particular problems. It may take the form of additional purchases by us. It may take the form of multilateral marketing agreements, financed jointly by the countries concerned and in some cases predominantly by the United States. In connection with such commodity agreements, special action by Congress may be necessary to make possible our participation in them, since they would involve some measures for the regulation of our imports or exports of the commodities involved.

Because of the lack of variety in the production and exports of the other American countries, the number of commodities which may require

action is relatively small. Only a few of them are competitive with our production. While, under certain circumstances to which I shall presently refer, extraordinary measures with respect to these commodities may have long-range importance, their immediate objective is to relieve the strains of wartime dislocation of world trade routes—strains resulting both in domestic economic difficulties and in shortage of means of payment for foreign purchases, especially from the United States.

Other important elements in our program of inter-American economic relations to which increasing attention is bound to be given in the immediate future may be listed as follows: Promotion of regular trade relations through the conclusion of trade agreements and in other ways; increased purchases in the Western Hemisphere of strategic raw materials; investment in productive enterprises designed to promote the diversification of production, especially along the lines of stimulating the output of commodities for which markets can readily be found in the United States or in other parts of the hemisphere, including materials of strategic value; aid in strengthening the monetary and foreign exchange position of countries which are in need of such assistance; implementation of various other provisions of the Havana resolution.

V

It is clear that the process of adaptation to conditions largely outside our control, of effective utilization of available instruments of action in defense of the national interest, and of the forging of new tools to cope with new and extraordinary conditions is bound to continue for some time and to determine the position of this country in a world economy dominated by war. But while giving our attention to the immediate problems thus brought forward, we must keep clearly in mind long-range objectives and problems. It is of the utmost importance that we look ahead to the time when war will come to an end, and the stupendous task will begin of reconstructing world economy on a peace basis. For our thinking and our action now may have an important bearing upon what happens then.

Just as no one can foretell when the present war will end, so no one can be certain today precisely what forces and what basic ideas will shape post-war international economic relations. But, after all, the range of possibilities is relatively limited. The crux of the problem will lie—in the postwar period as it did in the period preceding the war—in the choice of trading methods, which in turn will be determined by the underlying policies of the principal trading nations.

During the years immediately preceding the outbreak of war in Europe, two opposing tendencies were operative in the field of international commercial relations. One was the tendency to subject trade to a greater and

greater measure of control through the introduction and manipulation of higher and more effective trade barriers. The other was the tendency to liberate trade from the excesses of these ever growing restraints.

In some of its phases, the restrictive tendency was directed toward the achievement of national economic self-sufficiency. In its extreme phase, it represented a policy of using control over foreign trade as an instrument of political and military power for the attainment of both domestic and international political aims. In either case, the same devices were employed. The most important among these were the following: prohibitive customs duties; quantitative regulation in its manifold varieties; foreign exchange control, frequently accompanied by the use of multiple currencies; trading monopolies; barter transactions; bilateral balancing of trade; bilaterally exclusive trade arrangements and other forms of discriminatory commercial treatment.

The outstanding example of the use of these devices as an instrument of political action was in the case of Germany. By rigid regimentation of the trade process, by drastic selection of imports, and by aggressive policies toward weaker countries, Germany succeeded in making the substantially reduced volume of her international commerce serve the needs of her vast rearmament program and of her general preparations for war. Many countries used the various devices of trade control in the name and for the purpose of economic defense—in most instances as a line of least resistance from the viewpoint of domestic policy. In all cases, the operation of the restrictive tendency served to divert international commerce into artificial channels and to reduce both the volume and the economic benefits of trade, with attendant disastrous consequences upon general production, employment, and standards of living.

The other prewar tendency was based on the concept that the proper function of international trade is to enable each nation to secure the greatest practicable access to the resources of the entire world and the largest practicable outlets for its own surplus production, thereby opening to each nation wider economic opportunities than those afforded by the resources and markets confined within its frontiers, the availability of such opportunities being essential to modern economic organization and to improvement of living standards. Under this concept, international trade, in order to yield the greatest practicable measure of economic benefit, international trade must operate on terms of mutual advantage and on the basis of non-discriminatory treatment.

It stands to reason that, from this point of view, international trade is inevitably reduced in effectiveness when individual nations or groups of nations seek, through the use of excessive and unreasonable restrictions, to shut themselves off into self-contained units or to monopolize the economic resources of any area, without regard to the burdens which such policies

impose upon the peoples of other nations or to the ultimate effects of such policies upon their own people. Trade cannot prosper when attempts at exclusive trade arrangements between pairs of countries or the use of other means of discriminating in favor of some and against other countries render difficult a triangular and multilateral flow of commerce, which is necessary if traders are to be able, as nearly as possible, to buy and sell wherever they find it most advantageous to do so. Trade cannot prosper when its financial basis is impaired by instability of foreign exchange rates, by control over foreign exchange transactions, or by breakdown of a sound structure of international commercial and investment credit.

The prewar tendency directed toward the removal of these trade-diverting and trade-destroying devices found its clearest expression in the trade agreements program of our government. Under that policy, a vigorous effort was made to bring about a general reduction of excessive and unreasonable trade barriers and to place international commerce more and more on the basis of reasonable regulation and of the greatest possible measure of nondiscriminatory treatment—conditions under which, in the past, world trade had attained its highest degree of development and usefulness.

The twenty-one trade agreements negotiated by the United States between 1934 and 1939, together with efforts in a similar direction on the part of many other countries, represented substantial headway for the trade-liberating tendency. Like many other peacetime efforts, its scope became greatly limited by the outbreak of hostilities.

The war has greatly intensified the restrictive tendency. That has been a natural process, since the control devices which that tendency brings into being are, in fact, weapons of economic warfare. Not only the belligerents but all nations have adopted, in varying degrees, militant economic measures. Our own country, as I have indicated, has done so and may have to do more in this respect. But all this does not necessarily mean that, when the war is over, international economic relations will thenceforth inevitably be dominated by this type of trade methods, although it may well mean that the conflict between the two sharply opposing tendencies which were operative before the war will be even sharper in the postwar period.

The nature of the postwar conflict of tendencies as regards methods of international trade and the conditions in which that conflict will take place will depend on a number of factors. Of great importance in this respect will be the extent to which countries which, before the war, were the protagonists of the trade-liberating tendency—and especially our country—succumb to the temptation of embarking, during and immediately after the war, upon policies of trade regimentation and control beyond the temporary needs of current conditions. And obviously, much will depend upon the outcome of the war itself.

In this latter connection, quite apart from any subjective preferences, hopes, or desires, several possibilities need to be considered in an objective attempt at an appraisal. Such an appraisal must necessarily involve a large element of speculation. But in times like the present, prudence and wisdom demand, as extremely useful insurance, a visualization of alternative possibilities and preparation for developments which may or may not eventuate.

VI

From the point of view of commercial policy, the crucial question after the war will be whether or not any of the great trading nations will follow the restrictive trade tendency as a deliberate policy for the attainment of other than economic aims. This would be the case if, as a result of the war, Germany under her present leadership should succeed in establishing and maintaining control over most of the continent of Europe and perhaps over some adjacent areas. In that event, she would undoubtedly attempt, as the next immediate step, to organize the territory under her domination into a single economic unit, with Berlin as the focal point. That in itself would be a tremendously important new factor in the world trade situation. But the real extent of its significance would depend upon the methods which the German leaders would choose or find themselves able to adopt with respect to the economic relationship between the area under their control and the rest of the world.

So far as one can tell at this stage, the probabilities are against their choosing the way of thoroughgoing economic isolation. No area which they are likely to be able to seize by conquest is capable of providing for even a reasonable degree of self-sufficiency. Nor would such a policy be in consonance with their openly expressed ambitions. It is far more probable that the German leaders would attempt, at least for some time to come, to deal with the rest of the world on the basis of the type of methods which they employed for Germany proper before the war—highly centralized and rigorously regimented control of the trade process, combined with aggressive attitude and action in commercial negotiations and arrangements, possibly again as a tool in the service of a policy of further conquest.

If this should happen, the United States would face a grave and difficult situation. Our foreign commerce would unquestionably decline, and we might find it necessary to adopt temporarily even more far-reaching measures of economic defense than during the war period, while pushing still further our preparations for armed defense. But there is no reason to believe that, as a result of such developments, we, too, would be compelled or would find it advisable to adopt the German trading methods and thus, through our abject surrender, make likely a complete triumph in the world of that economically destructive system.

A situation such as is here envisaged might resolve itself into another

war forced upon the world by the leaders of Germany, or it might lead to an economic struggle of great severity. I have no doubts as to the final outcome of either of these conflicts, though one may well shudder in contemplating the price that would have to be paid in either case. I firmly believe that, with sufficient vision and determination elsewhere in the world, Germany, even if successful in the present war to the extent which is here assumed for the sake of discussion, would, unless she decides to risk another and even greater war, find herself in the end compelled by force of circumstances to abandon most, if not all, of her now favored trading methods—after inflicting great losses and great suffering upon herself and upon the entire world.

I hold this belief for two main reasons. In the first place, there is, in my opinion, serious doubt as to the ability of Germany, through her present methods, to create a powerful economic unit out of the divergent and enslaved portions of her would-be domain. And in the second place, our country, in my opinion, is fully capable of mobilizing enough economic power behind a program of sound international economic relationships to make reasonably certain that such a program would eventually prevail.

I am convinced that if we, in this country, adhere unreservedly to our own ideas of what to us are desirable international trade methods and economic relations; if we insist, even at the cost of rejecting ostensible temporary advantages, on dealing as far as possible on our basis of trade; if we exert every effort to make that basis effective over as large as possible an area of the world through co-operation with all nations willing and able to direct their international economic policies toward objectives similar to ours—then there would be more than substantial hope, even under the conditions here envisaged, for an eventual return to economic sanity in the entire world.

From this point of view, our economic relations with the other American nations would be of the greatest importance. Each of the American republics is fully cognizant of the dangers which would confront it if it had to face alone attempts at economic aggression on the part of a Germany in control of vast European areas. In close economic collaboration among themselves, the American nations would possess great economic power—for their own protection and as a factor in the shaping of the postwar world economy. As Secretary Hull said at the Havana meeting:

The American nations can build a system of economic defense that will enable each of them to safeguard itself from the dangers of economic subordination from abroad and of economic distress at home. It is no part of our thought to obstruct in any way logical and natural trade with Europe or with any other portion of the world, but rather to promote such trade with nations willing to meet us, in good faith, in a spirit of friendly and peaceful purpose, and on a plane of frank and fair dealing. Against any other kind of dealing, we naturally will protect ourselves.

For this purpose, the program embodied in the Havana resolution would provide an ample foundation. Through commodity arrangements of the

kind envisaged there and through the other types of action provided for, it should be possible for the Western Hemisphere to go far toward attaining both the short-run and the long-run objectives on which the twenty-one American republics are in agreement today.

If Germany and her partners are not successful in their attempt at widespread conquest, if the continent of Europe and the other areas of the world now conquered or under threat of subjugation by force are again organized into a number of independent and sovereign nations or, perhaps, into groups of voluntary associations, the factor of economic aggression will be removed. That would be a fact of immense significance, but it would not, of itself, mean an immediate and automatic return to desirable forms of international economic relations. There would still be necessarily an extremely difficult period of transition from war to peace, during which many extraordinary measures and policies would be retained from the war period and, perhaps, some new ones introduced. Even given universal willingness and determination to restore the world economy as speedily as possible to a peaceful basis, there would still be the tremendous task of redirecting basic policies toward the re-establishment of friendly and constructive international relations.

In this eventuality, too, an economically collaborating and, therefore, economically strong Western Hemisphere, sincerely devoted to the ideal of economic co-operation for the mutual benefit of all concerned and ready to take a position of leadership in abandoning, as quickly as circumstances permit, such excessive restraints on trade as may be forced by the distortions and disruptions of abnormal international relations, will be a factor of great importance.

Through its own policy and action, through its wholehearted participation in a system of inter-American collaboration, and through co-operation with all nations seeking the same objectives, the United States, in its own interest, can and should play a role of great importance in the postwar economic situation. The essential elements of that role, in my opinion, should be: (1) adherence to the basic ideas of sound international economic relations, to the establishment of which this country made so marked a contribution in the years immediately preceding the war; (2) firm determination to help translate these ideas into practical realities; and (3) willingness to use for that purpose its great economic and financial resources.

In my discussion, I have excluded the eventuality of our participation in war, either in the immediate future or later. But I am certain that even if that should unhappily occur, the basic considerations of our foreign economic policy which I have attempted to set forth would not be altered.

It goes without saying that, during the war or after the war, we must do everything that is necessary to protect our national interest and to pro-

mote the well-being of our people. In the difficult and perilous times in which we live, we must be prepared, so far as is humanly possible, to meet any contingencies that may confront us. But in so doing, we must constantly keep before our eyes the basic objectives we seek to attain. And we must handle our day-to-day problems and decisions in such a way as to make least difficult, later on, the attainment of these all-important objectives.

UNITED STATES IN THE WORLD ECONOMY, 1940: A SUMMARY

By ERNEST MINOR PATTERSON

It is my assigned task to comment on the papers by Messrs. Ellsworth and Pasvolsky and also to survey the broad field covered by the series of papers in this volume, indicating their interrelations and suggesting their significance to the economy of the United States in the world economy. No economist needs to be reminded of the difficulties of such an undertaking. Suffice it to say that the following discussion is presented with the greatest of diffidence.

Each of the six topics is related to the rest. The location in the United States of over 70 per cent of the world's supply of monetary gold may not only affect the movement of prices in the United States but ways may be found by which, say through further "devaluation" of the dollar, an additional gain or "profit" could accrue to the United States Treasury. If because of its presence prices should rise in spite of attempts at monetary control, the status and role of both public and private investment will be affected, the amount of employment will be modified, the status of agriculture will be influenced, and of course our relations to the economy of the rest of the world will be altered.

Recurring deficits in the federal budget and the way in which they are handled will have repercussions on private financing; will affect employment and agriculture; may lead to a rise of prices which will be all the easier since there is so large a gold base upon which it can rest; and these deficits themselves may arise out of our policies and practices in the international field. As private investments increase or decrease there will be fluctuations in the volume of employment; in the demand for food and other products of the farms; prices will move up or down; the real or fancied need for many public expenditures will be modified and the size of the government deficit will be affected; our demand for certain foreign products will be altered; and the capital movement to and from abroad and the consequent gold flows will change.

It is interesting to notice the major attitudes of the various writers. Not all of the papers were accessible when this discussion was prepared and those that were at hand have of necessity been examined hurriedly. To some extent, therefore, injustices may be done in the comments that follow, although it is hoped that they are minor. Permeating the papers and expressed in a great diversity of ways, there are five contrasts, viz., between (a) a *laissez faire* and a controlled economy; (b) the best allocation of resources and the best allocation of income; (c) a closed and an "open" economy; (d) a mature or stagnant and an expanding economy; and (e) a regional and a world economy. The papers are so admirably prepared that only in a few cases and on particular points do the writers fit clearly into one classification rather than another. All are fully aware that sweeping generalizations and unqualified attitudes are perilous. Perhaps any summary of their positions will be inaccurate but the general impression given to at least one reader is as follows: Government controls have been increasing and will continue to increase; while consideration of the best allocation of

resources will persist, there is a growing tendency to allocate income with a view to enhancing welfare; in spite of the recent developments of self-sufficiency or autarchy, a considerable degree of world interdependence will persist; our economy has not matured and is not stagnant, but further expansion may be confidently expected; world economic relations of the future will be more than in the past between large economic and political areas.

To some, such views may not be disturbing. It is possible for them to argue that basic economic forces are unaltered and that there is little or no occasion to modify most of the classical or neo-classical doctrines. To others, it will seem that all or most of our older ideas should be abruptly swept aside and new generalizations substituted. Probably, however, the vast majority of economists will accept neither of these extremes. They will unhesitatingly abandon or qualify their past views whenever and wherever a change seems warranted but will be careful not to discard any aspects of the older body of thought that still seem valuable.

It will be assumed that the above summary is a fair statement, not only of the views of the twelve authors of the main papers in this series, but that it reflects reasonably well the present attitude of the majority of American economists. Starting from this assumption, an attempt will be made to present a few of the implications of these views in the field of international economics. The analysis will, of course, touch only a small part of the vast field and, needless to say, any conclusions reached are quite tentative.

There are available many organized statements of the body of doctrine that presented neatly and concisely the orthodox views about international economic relations.¹ There are (or perhaps were) four leading theories or "laws" that expressed these relations: (1) the Ricardian theory of the flow of the precious metals, modified in recent years by omitting or minimizing silver and emphasizing gold; (2) the doctrine of comparative costs; (3) the theory of the foreign exchanges, usually identified with the name of Goschen; and (4) the quantity theory of money. Related to these four and perhaps to be added as a fifth is the theory of purchasing power parity. Taken together they are a satisfying way of stating the influences dominating international economic relations which include "all economic transactions involving passage across a national frontier."²

Certainly there are today many reasons for reconsidering and perhaps modifying all five of these generalizations. If they were on the whole helpful in the past, as this writer believes, they are less helpful now. For some time gold has not been distributed in such proportions among the countries of the world as to accommodate itself to the natural traffic which would take place if no such metal existed. When it does leave country A for country B, there does not follow the decline in prices in A and the rise in B that Ricardo and Goschen describe and that crude statements of the quantity theory of money and of purchasing power parity suggest. There is more and more difficulty in accounting for movements of trade³ by

¹ See *inter alia*, Herbert Feis, *The Changing Pattern of International Economic Affairs* (New York, 1940), Chapter I.

² R. F. Harrod, *International Economics* (New York, 1933), p. 4.

³ See F. W. Taussig, *International Trade* (New York, 1927). Even Taussig confessed (p. 151) that his statement of theory was "heroically abstract" and that verification was extremely difficult.

referring to the doctrine of comparative costs, either in its more "orthodox" forms or in the more modern presentations.⁴

It may be that the events of recent years are "abnormal," that they are to be explained by the prevalence of war or near-war economics. If so, they may be viewed as temporary and it may be wise not to abandon the older theories or to modify them extensively, except as an explanation of passing conditions. On the other hand, if sweeping changes are taking place that will profoundly modify the various national economies as we have known them, we may be forced to a more complete adaptation of our theories. For example, it may be that G. D. H. Cole is correct in saying, "It looks today as if the Victorian epoch of *laissez faire* were but a brief interlude between two long periods of collective regulation."⁵ Notice *inter alia* the views in the earlier part of this volume of T. W. Schultz who observes that "we are likely to have more rather than less public management" and that, along with an effort to secure the best allocation of resources, increasing attention is being given and should be given to the best allocation of income, the criteria for the latter being considerations of general welfare. Notice also the latter part of the paper by Leo Pasvolsky with its reference to possible practices in international trade when the war ends.

It is possible, of course, to argue that the present trends are to be explained by the personalities of certain dictators and that their ultimate overthrow will mean a return to nineteenth century practices. But such a view is like the "devil theory of war." When government controls have increased not only to the extremes in Russia, Germany, and Italy but also to a marked degree even in "democratic" countries like the United States, and when their advance is observable for many decades under both conservative and liberal administrations, one can hardly dismiss them as ephemeral. When J. M. Keynes can write so convincingly of *The End of Laissez-Faire*,⁶ and Arthur M. Burns of *The Decline of Competition*,⁷ it is difficult to believe in a "return to normalcy" of the sort presumably meant by President Harding.

The growing complexity of life has doomed the individualism of a century ago and has brought a larger amount of collectivism, both private and public, with an increase especially in government participation. Rapid technological developments have made all parts of the world more interdependent than ever before, but added government controls have tended to increase the barriers to trade and develop national self-sufficiency.⁸ The economic collapse of 1929 came upon a world which had restored the actual destruction of the first World War but had not remedied the dislocations it had brought, while that war itself was in part to be explained by the difficulty in operating political and economic institutions that were workable in the nineteenth century but not suitable in the twentieth century. The strains since, say, 1900 or 1910 are in important respects like those at the end of the eighteenth century. While more and more attention had been given to the allocation of income on some other basis than that determined by the most effective allocation of resources for production, the

⁴ See Bertil Ohlin, *Interregional and International Trade* (Cambridge, 1933).

⁵ *British Trade and Industry* (London, 1931), p. 22.

⁶ London, 1926.

⁷ New York, 1936.

⁸ Eugene Staley, *The World Economy in Transition* (New York, 1939).

distress of the last decade has brought an acceleration of this trend both in practice and in theoretical analysis.

There are many implications arising from these trends and only a few comments can be made. Here and there among the papers in this series there are references to the growing difficulty in finding a border line between economics and politics. Let us pursue this idea in just one direction. In economics there have been certain problems that have been especially baffling. One has been the determination of costs with sufficient precision for many purposes; e.g., in adjusting protective tariffs at a level that covers the difference between the cost of production in the United States and abroad. In addition to the impossibility of ascertaining the facts, especially abroad but also at home, there have been all the baffling issues raised by high costs, low costs, average costs, marginal costs, bulk line costs, and costs that fluctuate with volume of output and with changing price levels. Then there has been the impossibility of a logical allocation of "overhead" costs among by-products.

As government controls have grown and as more attention has been given to the "best allocation of income" these difficulties have been intensified. If those are correct who anticipate further increases in government controls, more attempts by governments to influence income distribution, and the other changes mentioned above, the implications are sweeping. As just noted, costs of production may be difficult to ascertain even for a single private plant and far more so for an industry. But if we assume an entire national area operated as a co-ordinated economic unit, the task becomes baffling.

One of the factors is the existence of overhead costs as distinct from variable. With a large overhead there is a wide difference between average costs when plant is operated at only part capacity as contrasted with full capacity. But under private ownership and control certain social facts are obscured. Much of the outlay for wages is a variable cost for the employer who hires and fires as orders fluctuate. Yet workers who are discharged either live on their savings or are supported by charity (public or private), or perhaps deteriorate in efficiency because they are not properly fed, housed, and clothed. There is a social cost that persists. As government extends its functions and its controls, the existence of these costs which, at least to a degree, have always been a "social overhead" are more definitely recognized as such. Public employment and relief appear on a larger scale to be paid for out of public funds. Taxes must be increased or public debt will grow. If public employment can be more stable than private employment and directed into truly productive channels, the national income will be maintained. If not, the national income will fluctuate.

Another difficulty with costs is that of a proper allocation of overhead (or indirect costs or joint costs) among by-products. Economic literature is filled with discussions of this baffling question. Some at least would say that no thoroughly satisfactory answer has been found and that cost accountants have merely given us helpful rule of thumb procedures. Be that as it may, the complexities are enormously multiplied as a national economy is more and more knit together under a single head—the government. All of the many thousands of products become by-products of a great social organization. Among them are to be allocated the indirect (or joint or overhead) costs.

Now add to the picture the growing emphasis on allocation of national income with welfare as a guide rather than allocation of resources with a view to maximum productivity. Create national planning boards with power to carry out their judgments or boards whose advice will be followed. They may be ignorant and arbitrary, or even brutal, or they may be intelligent, considerate, and humane. But they have the task of allocating all or an enlarged part of the national income among the almost countless fields of production. They control or strongly influence what will be produced and in what quantity. Since they may dictate wages, interest, and perhaps selling prices, they dominate the cost structure of every industry and every product and, by deciding upon the direction and weight of taxation and the extent to which public funds will be loaned here rather than there, both the production and distribution of the national income are in their hands.

If at this point objections are raised by those who are skeptical about national economic planning and believe it cannot be as satisfactory as private planning or the absence of planning under capitalism, it is enough to point out that government controls over production and distribution of national income have been growing and still continue to grow, especially perhaps in Russia, Italy, and Germany, but also in the "democratic" countries. To the extent that they increase, the problems mentioned gain in magnitude.

Only a few may be stated. If the policies and practices of our own government, as described and critically examined above by Kreps, Schultz, and Tolley, are continued, what considerations will dominate in directing production; e.g., on our farms? Will concern for our farmers, whose share of the national income has admittedly been low, lead us to raise their incomes in a way that will encourage the maintenance of the present or even a larger percentage of them on the farms in an era when in nearly all countries the percentage of the total population engaged in food production is on the decline? Will we keep so fully in mind the slogan of an "abundant economy" that we forget the exhortations of Henry A. Wallace about a "balanced economy"? Critics are wrong who contend that socially directed allocation of income is something new. We have practised it for years with protective tariffs, mail subsidies, lowered freight rates on commodities destined for foreign markets, and in other ways. But the practice is growing.

Special reference may be made to its significance in foreign trade and attention is particularly directed to the papers by Ellsworth and Pasvolsky. Much is said by them and by other writers of the methods of Germany. That country has on a vast scale and in many ingenious ways subsidized exports, securing the funds from the whole national economy by taxation and otherwise. How about the United States? We, too, have subsidized our merchant marine, have allowed special railroad freight rates on exported goods, and with our protective tariffs have at times encouraged dumping of our products in foreign markets.⁹ Recently we have given special subsidies on exported cotton and wheat and though the results may be dubious¹⁰ we cannot point to the wicked practices of others and proclaim our own virtue. It was inaccurate a few years ago to argue as many

⁹ Jacob Viner, *Dumping: A Problem in International Trade* (Chicago, 1923).

¹⁰ See V. P. Timoshenko, *Wheat Subsidization and Exports* (Stanford University, 1940).

did that the increase of protective tariffs in many other countries was merely retaliation for our Smoot-Hawley tariff. Some of the foreign advances were reprisals but in general the same or similar influences were leading all of us to indulge in like practices. The same may be said of export subsidies. Some countries are using them more than others but the same influences are operating everywhere.

It is such considerations as these that raise doubts about the policy advocated by Ellsworth. The trend seems at present to be clearly in the direction of larger economic and political groupings when the present war ends. There may be three, or four, or a half dozen dominant world powers with the other nations more fully within their political and economic orbits than in the past. In the heat of war controversy and because we are prone to contrive simple solutions it is not hard to talk of an American economy which will embrace the entire Western Hemisphere. Its difficulties were quickly illuminated when a great cartel for marketing all surplus products of the Americas was publicly and very briefly discussed. Whether the more modest proposals, such as the recent quota agreement on coffee, will be effective remains to be seen.

There is no reason to assume that the regional groupings will completely dominate the world scene. There are two approaches—the regulated and the unregulated. They seem to be contradictory. They may be mutually incompatible, as Condliffe, Tasca, and others insist.¹¹ But, as they point out, there is no reason to assume that either must dominate. Instead a rapprochement may be arranged. As larger trading areas are developed we may hope that responsible leaders in each of them may find ways of adjusting economic relations between them that may be no worse and may conceivably be far better than the haphazard relations of the past. A part of our present difficulty arises from the experiences of war and of preparation for war and a part from the necessity for adjusting nineteenth century institutions to twentieth century conditions. A first step is to realize that many of the same forces that have brought such profound changes in other parts of the world are operating also in the United States.

¹¹ J. B. Condliffe, *The Reconstruction of World Trade* (New York, 1940); Henry J. Tasca, *World Trading Systems* (Paris, 1939).

ECONOMIC CONSEQUENCES OF WAR SINCE 1790

WAR AND INFLATION SINCE 1790 IN ENGLAND, FRANCE, GERMANY, AND THE UNITED STATES

By HENRY OLIVER
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I. Statistical Relationship

Since 1790 there have been more than two-score wars of varying sizes and descriptions. Only four, however, have involved sustained heavy fighting on the part of Great Britain, Germany, France, or the United States: the Napoleonic Wars, the American Civil War, the Great War of 1914-18, and the present war.

These same wars are also the only conflicts which have been accompanied by major price upheavals in any of the four great Western Powers. The Mexican, Crimean, and Franco-Prussian wars, among others, were accompanied by some degree of price increase; but only in the above four have prices risen far above the prewar levels.

It is perhaps worth while pointing out that the English, French, and German wholesale price rises of the World War period were greater than all previous wholesale price increases in the 150-year period except those occasioned by assignat and Confederate inflation, which were caused largely by a new government's lack of strength and authority rather than by war as such. After the start of the Napoleonic Wars in 1793, British¹ and German² prices each rose by about 75 per cent, and American prices were approximately doubled;³ no indices of French prices are available, but it is probable that, after the postassignat deflation, French prices did not rise as much as the English and the German.⁴ During the Civil War prices in the North were increased by about 150 per cent;⁵ prices in England,⁶ Germany,⁷ and France⁷ rose relatively little or not at all. Between 1914 and 1920 English,⁸ American,⁹ French,¹⁰ and German¹¹ prices advanced

¹ N. J. Silberman, "British Prices and Business Cycles, 1779-1850," *Review of Economic Statistics*, October, 1923, Supplement.

² *Sonderheft Nr. 37 des Instituts für Konjunkturforschung*.

³ G. F. Warren and F. A. Pearson, *Prices*, pp. 10-11.

⁴ Gold flowed into France during this period; French bank notes were usually convertible; and Napoleon's armies were supported largely by requisitions from conquered or invaded territories. (See R. G. Hawtrey, "The Bank Restriction of 1797," *Economic Journal*, March, 1918; and J. H. Clapham, "Europe after the Great Wars, 1816 and 1920," *Economic Journal*, December, 1920.)

⁵ Warren and Pearson, *loc. cit.*; and W. C. Mitchell, *A History of the Greenbacks*, pp. 264, 273, 277.

⁶ Sauerbeck's indices record a 12 per cent rise during 1861-64.

⁷ A. Jacobs and H. Richter (*Sonderheft Nr. 37 des Instituts für Konjunkturforschung*) record slight price falls in both Germany and France during the Civil War period. Soetbeer's indices record a slight rise in German prices.

⁸ A. L. Bowley, *Prices and Wages in the United Kingdom, 1914-20*, p. 7.

⁹ Warren and Pearson, *loc. cit.*

¹⁰ E. L. Dulles, *The French Franc, 1914-1928*, p. 510.

¹¹ C. Bresciani-Turroni, *The Economics of Inflation*, p. 442.

by 223, 145, 500, and 1600 per cent respectively. Thereafter French prices rose another 250 per cent above the prewar level, and German prices reached astronomical heights.

The above facts emphasize another aspect of post-1914 price movements which seems worthy of mention: in all four countries the peak came well after the end of hostilities. The British and American peaks came in 1920, the German in 1923, the French in 1926. This price behavior is in marked contrast to that of the Civil and Napoleonic Wars. In the former the Northern peak was reached in late 1864;¹² the Southern peak in the troubled times around Appomattox. In the Napoleonic Wars the French peak was reached in 1796,¹³ the German in 1808,¹⁴ the English¹⁵ and the American¹⁶ both in 1814; although British and German prices both rose after 1815, the post-Waterloo peaks were not nearly as high as the earlier ones. Perhaps the closest analogy to the post-1918 price movements is that provided by price behavior during 1871-73, when a mild wartime price rise was followed by a further, although moderate, cyclical increase.¹⁷

In the present war British wholesale prices rose 24 per cent during late 1939, an additional 18 per cent by the midsummer of 1940, and have been roughly constant since then. In the World War British wholesale prices rose 21 per cent by March, 1915, remained roughly constant until November, 1915, and then started rising rapidly again.¹⁸

In the United States in the present war, wholesale prices advanced 4 per cent during September, 1939, fell slightly early in 1940, and are now somewhat above at the September, 1939, level. During the World War American prices remained roughly constant until October, 1915, and then started advancing rapidly.¹⁹

Since the outbreak of the present war, no French indices have been published, but in February the London *Economist* estimated that wholesale prices had risen by 20 to 30 per cent. Since then prices must have risen much higher, as is evidenced by recent newspaper dispatches revealing important increases in the maximum prices approved by the Vichy government.²⁰

¹² See Footnote 5.

¹³ Bresciani-Turroni, *op. cit.*, p. 24.

¹⁴ Jacobs and Richter (*op. cit.*) record the highest German index in 1808, and show lower peaks in 1795, 1806, and 1817. Professor Schumpeter (*Business Cycles*, Vol. I, p. 208) states that price peaks appear to have been realized in 1805 and 1818.

¹⁵ Professor Silberling's indices record the British "high" in 1814 and show lower peaks in 1796, 1801, 1810, and 1818. Jevons' indices show peaks in the same years, but make the 1810 peak the highest.

¹⁶ Warren and Pearson, *loc. cit.*, and W. B. Smith, "Wholesale Commodity Prices in the United States, 1795-1824," *Review of Economic Statistics*, 1927, pp. 171-183.

¹⁷ German prices rose 20 per cent, French prices 5 per cent, British prices 15 per cent, and American prices 4 per cent during 1871-73 (Jacobs and Richter, *op. cit.*).

¹⁸ Current data from the *Federal Reserve Bulletin*; 1914-15 from Bowley, *loc. cit.*

¹⁹ Current data from the *Federal Reserve Bulletin*; 1914-15 from Warren and Pearson, *loc. cit.*

²⁰ Current data from *The Economist* of February 6, 1940, and the *New York Times* of December 13, 1940; 1914-15 data from Dulles, *loc. cit.*

German wholesale price indices have recently shown approximate price stability, but are suspect for several reasons, the most important of which are probably the deterioration in quality, the increasing reliance upon less satisfactory substitutes, and the use of subsidies, all of which characterized 1937-39 and have probably characterized 1940, also.

In conclusion, it might be added that the high degree of rationing to which the belligerents in the past two wars have resorted tends to rob any price indices of their significance. This statement applied especially to Germany and France of the present war and Germany of the later stages of the last one, and especially to the cost-of-living indices, which, in this war, have shown the following increases: Great Britain, 12 per cent;²¹ Germany, 4 per cent;²² France before the spring of 1940, 12 to 13 per cent.²³

II. Causes of Price Behavior

The forces that have governed price behavior during the wartime and immediate postwar inflationary periods can be grouped under the following headings: (1) psychological items, (2) cost increases due to an unfavorable shift in the supply curve, (3) cost increases due to the pressure of new funds on scarce resources, and (4) various governmental, business, and labor controls.

1. The most important of the psychological items seems to have been fear of a future decrease in the value of money. This fear has expressed itself sufficiently on at least four occasions to have been the dominating force behind price behavior: when earlier assignat inflation led to fears of further increases in the quantity of money and further price rises;²⁴ when fear of Confederate defeat and the example of continuing monetary inflation led to extreme rises in Southern prices;²⁵ when the influence of past inflation and continuing exchange depreciation led to the German debacle of 1923,²⁶ and when similar circumstances caused the less drastic French price-rise of 1922-26.²⁷

So far, however, with the possible exceptions of the Civil War price rises,²⁸ fear of a future decrease in the value of money seems not to have become the dominating force until after prices had already been pushed importantly upward because of more fundamental reasons. Moreover, it seems to be worthy of remark that, in each of the three famous cases of

²¹ Data from the *Federal Reserve Bulletin*.

²² Data from the *Federal Reserve Bulletin*.

²³ *The Economist*, February 6, 1940.

²⁴ S. E. Harris, *The Assignats*; and R. G. Hawtrey, "The Collapse of the French Assignats," *Economic Journal*, September, 1918.

²⁵ J. C. Reed, "Economic Conditions in the South during the Civil War," *The South in the Building of the Nation*, Vol. V; and Willard Thorp, *Business Annals*, pp. 128-129.

²⁶ C. Bresciani-Turroni, *op. cit.*

²⁷ E. L. Dulles, *op. cit.*

²⁸ In *A History of the Greenbacks* Professor W. C. Mitchell argues that changes in the prospects of convertibility chiefly determined the course of Northern prices.

hyperinflation—those of the assignat, the Confederate dollars, and the mark—the results are largely attributable to governmental lack of strength and authority.

The importance of the role of the psychological items under less extreme circumstances is quite difficult to estimate. At times at the start of a war there has been an increase rather than a decrease in the propensity to hold cash balances.²⁹ However, anticipation of future high prices seems to have caused some speculative increases in various commodity prices in most war periods and in most countries. Examples are the speculative purchases which helped to push up prices during the 1918-20 boom and the anticipation of higher commodity prices in England, France, and the United States in the fall of 1939.³⁰ As has been stated above, the importance of such speculation is hard to judge; at times speculation may merely anticipate later price increases without adding independently to the price figures.

2. Cost increases due to an unfavorable shift in the supply curve have been caused by invasion, destruction of property, economic disorganization, failure to maintain capital, loss of man power, and disturbances in international trade. France of the last two wars seems to be an example of a country which has experienced each type of cost increase mentioned; the same can be said of the South during the Civil War. In addition, the often invaded Germany of the Napoleonic period and the blockaded Germany and counter-blockaded England of the last two wars seems especially worthy of mention.

Evidence concerning the importance of such supply shifts is unsatisfactory at best. However, data on increases in the quantity of money seem to imply that cost increases due to supply shifts were not responsible for the greater part of the price increases in any of the World War belligerents, in either of the Civil War belligerents, or in England, the United States, or Republican France of the Napoleonic period. In Napoleonic Germany supply decreases may have been relatively more important; specie prices rose more than in Great Britain;³¹ according to Professor Schumpeter, monetary disorders were slight;³² the price historians Jacobs and Richter record several agricultural shortages; and armies at that time frequently subtracted directly from the supply of goods instead of adding to the monetary demand. In passing, it might be remarked that, but for severe rationing and price fixing, supply decreases would probably have been more influential in pushing prices up during the World War.

During the present war cost increases due to an unfavorable shift in

²⁹ For instance, money in circulation advanced more rapidly than prices in Germany at the start of the first World War (Bresciani-Turroni, *op. cit.*, pp. 440-442).

³⁰ The brevity of the interval since the last war and the publicizing of the relationship between war and inflation were probably largely responsible here.

³¹ See Jacobs and Richter, *op. cit.*, and R. G. Hawtrey, "The Bank Restriction of 1797," *op. cit.*

³² *Business Cycles*, Vol. I, p. 261.

the supply curve seem to have been relatively more important. German "disguised price rises" in the immediate prewar period seem chiefly attributable to the attempt to achieve autarchy; similar developments since August, 1939, seem largely attributable to the British blockade. Much of the general English price increase in late 1939 seems attributable to the higher costs of foreign goods.³³ And the stories of scarcity coming out of France indicate that unfavorable supply conditions must account even more importantly for price increases there.

The specific effects of unfavorable shifts in the supply curve seem self-evident. Invasion and destruction of property both directly subtract from the capacity available for wartime production; the former, however, has a partly offsetting virtue in that not all the consumers in the invaded areas become refugees and add to the pressure on consumers goods in the area still carrying on the war. Economic disorganization lowers man-hour output and thus achieves the same results as destruction of property. Disturbances in international trade are akin to invasion in that they decrease the extent or the advantages of territorial division of labor. Failure to maintain capital in consumers goods industries at first helps to keep prices low, by allowing replacement funds to be diverted to fiscal purposes; later it results in rising physical costs in the consumers goods industries. Loss of man power results in replacing superior with inferior workers and in adding to the length of the work-week, both of which lower man-hour output and thus add to costs if merely the time-wage rate is kept the same.

In passing, it might be added that the English and the French in the past two wars have partly offset various physical strains by making use of their foreign holdings and foreign credit. The Germans in the last two wars have partly offset various physical strains by making use of requisitioned products and captive labor. Napoleon is also thought to have made effective use of direct levies upon invaded or conquered territories.

3. Seemingly with good cause, economists have usually stressed most the pressure of new funds on scarce resources. Such new funds have come into being chiefly as a result of fiscal policy, but also as a result of loans granted to business, and also—in some countries—as a result of an inflow of funds from abroad.

New monetary issues necessitated by budgetary deficits seem to have been the leading cause of price increases in England during at least the early part of the Napoleonic Wars,³⁴ in the United States during the War of 1812,³⁵ in all the major belligerents of the World War, and perhaps

³³ The effects of the "railroad spiral" might also be mentioned.

³⁴ Professor Schumpeter (*op. cit.*, p. 261) states that Treasury inflation came to an end before 1800. Professor Cannan (*The Paper Pound of 1797-1821*, pp. xvii-xviii) places the date at 1810; Professor J. W. Angell (*The Theory of International Prices*, p. 468) implies that governmental borrowing was an inflationary force over a longer period.

³⁵ The government financed the war largely through loans from the Middle Atlantic banks.

also in the North during the Civil War.³⁶ In addition, fiscal policy co-operated importantly with psychological causes during assignat, Confederate, and post-1920 mark and franc inflation, and was an important ally of new business loans and speculative bidding during the boom of 1918-20.

In the present war fiscal policy has resulted in the issuance of new funds in Germany, England, France, and the United States.³⁷ German note circulation increased by 12 per cent through September, 1940; British note circulation also advanced 12 per cent through September, 1940; and British demand deposits rose 12 per cent through August, 1940; American money in circulation increased 11 per cent and member banks' demand deposits rose 11 per cent through September, 1940. In France note circulation increased by 20 per cent prior to June, 1940; since then no figures have been published, but the new notes issued for the sake of the German army must have swelled the total greatly.

The exact effects of the new funds, of course, are not always obvious. In the United States, however, the new money seems to have been offset almost exactly by rising production and falling velocity. In Germany governmental policy has for some time now almost entirely nullified the direct price effects of monetary expansion,³⁸ but the recent 4 per cent rise in the cost-of-living index may partly reflect the pressure of new funds, and there have been rumors of high prices paid for such objects as second-hand furniture and art objects. In England it is hard to say to what extent the new funds have been offset by rising production and to what extent they have pushed up prices; but the London *Economist* believes strongly that inflationary results have been experienced. In France, as has been stated before, no price indices are available; but the pressure of funds created for the German army must have helped to produce the recently announced price increases.

Business loans seem to have been an important cause of price increases in the later stages of the British Bank Restriction period and during the boom of 1918-20; and, together with foreign funds, business loans seem chiefly to explain the rise of prices in the neutral United States of the earlier stages of the Napoleonic and World Wars. At other times, such as the period of American participation in the World War, business loans seem to have played a role, but a subordinate one.

One question that arises here is that of the extent to which new funds created for the Treasury or for business have served to push up prices and of the extent to which they have merely served to sustain price increases. Similarity in the nature of monetary and price movements obviously does not necessarily imply that the changes in money caused the changes in price;

³⁶ See Footnote 28.

³⁷ Data from the *Federal Reserve Bulletin*.

³⁸ K. E. Poole, *German Financial Policies, 1932-39*.

for example, the psychologically caused price rises mentioned earlier may have brought about the increase in the quantity of money. Also, various administrative controls may have pushed up prices and thus have necessitated an increasing quantity of money.

But, of course, to attempt to distinguish sharply between the effects of administrative controls and the effects of increases in the quantity of money, is to attempt an impossible task. Quantitative analysis becomes misleading if it assumes that the pressure of funds on scarce resources pushes up prices entirely independently of the decisions of governmental, business, and labor agencies.

It might be added that, of the three types of decisions, those made by labor agencies are potentially the most important, since higher wages not only mean higher costs but also tend to increase the pressure of funds against consumers goods and thus make the process of Treasury inflation cumulative. Profit increases due to the upward administration of prices can more easily be taxed away. However, during such periods as wartime either price or wage administration upward is apt to lead to the other and thus to a spiral; such price movements are probably more important in their cumulative effects than in themselves.

4. Governmental decisions concerning purchasing policy have obviously helped to determine what prices will be. Some decisions have tended to make price a specific figure: for example, price fixing. Others have tended to exert a less specific effect: for example, cost-plus rulings and bulk-line rulings. Still others have tended only to affect the extent of competition for scarce resources: for example, priority rulings and decisions to let or not to let governmental agencies compete against one another.

Many of these decisions, of course, have not directly affected the price indices; the prices of munitions, ships, etc., are not included in the index calculations. However, the prices which the government has paid for such products has helped to determine prices in the supplying industries and also the quantity of new money. Thus in both these indirect ways all purchasing decisions have helped to determine the price figures entering into the wholesale price and cost-of-living indices.

Of the direct effects of governmental purchasing policy, there might be mentioned the following: price fixing and priority rulings have obviously tended to diminish the bidding for scarce resources; cost-plus payments have given producers an incentive to push up costs; bulk-line decisions have geared prices to the costs of the marginal bulk-line producers; buying through advertising for competitive bids has tended to make price the result of less governmentally-affected market conditions.

However, market conditions free from direct governmental price controls have not always been free from business and labor controls also. Nor have prices governed by cost-plus and bulk-line rulings always been free

from business and labor controls. Price rises and wage increases have not always waited for the pressure of funds to make resources scarce; and, indeed, the unregulated industries supplying materials and the labor groups supplying labor to the armament and similar industries have been in an especially favorable position for administering prices upward.

Unfortunately, the extent to which prices and wages have risen because of price administration and labor union action is not known and cannot be determined. Concerning the Napoleonic and Civil Wars, perhaps the most that can be said is that labor unions were almost nonexistent in the first war and not very strong in the second, and that historical studies seem to indicate that price administration is not a very recent phenomenon. Nor does the World War, when price and wage administration were undoubtedly both present, provide satisfactory statistical evidence.

Evidence of the presence of price and wage administration during the World War is not hard to find, however. Selling costs, product differentiation, and the like prove the existence of the former.³⁹ Mediation boards and the adjustment of wage rates to the cost of living indicate the presence of the latter.

Since the outbreak of the present war, German direct controls have been severe enough to prevent administration of prices and wages upward. The same has supposedly been true of French controls. In England the incentive to administer prices upward has probably been dealt a knock-out blow by the 100 per cent excess profits tax, but labor union demands for higher wage rates accompanying higher living expenses seem to have helped push up the price indices. In the United States so far the only general price increase has been the speculative one of the fall of 1939; but, within the price and wage increases of 1936-37 only four years past, the Defense Council is probably correct in taking the stand that administrative vigilance as well as proper fiscal policy is necessary to prevent price rises. It might be added that, at the present, at least, not all wage increases will necessarily push up prices; the wage-price relationship is frequently capable of variation, and the consumers goods industries seem capable of producing additional output at current prices.

³⁹ However, the stability of certain administered prices helped to keep prices from rising more rapidly, just as, during recession, such stability tends to keep prices from falling more rapidly.

POSTWAR DEPRESSIONS

By WILLARD L. THORP

Associated Gas and Electric Corporation

John Adams once said:

I am old enough to remember the war of 1745 and its end, the war of 1755 and its close, the war of 1775 and its termination, the war of 1812 and its pacification. Every one of these wars has been followed by a general distress, embarrassments of commerce, destruction of manufactures, and the fall of the price of produce and lands.

Had he lived long enough, and had his vocabulary had a sufficient number of additional synonyms for "end," he might have added the Mexican War, the Civil War, and the World War to his list of American postwar depressions.

If the former president had made a similar examination of the history of England, he would have learned that an economic crisis followed the conclusion of the Dutch War in 1672, and would have noted the collapse in 1763 of the brief but excited boom which followed the Peace of Paris ending the Seven Years' War with France. He certainly would have added to his list the severe business distress which developed in 1815, shortly after the Battle of Waterloo. He might have been surprised to learn that the peace which ended the war between Brazil and Paraguay in 1872 ushered a long and severe depression in to Brazil, and that the culmination of the Russo-Japanese War in 1905 had similar economic consequences for Japan. The ending of the Boer War in 1902 resulted in a trade and land boom in South Africa, promptly followed by a prolonged depression. And he would have brought his list to a grand climax with the supreme instance of postwar distress—the experience of the whole world after the World War. The collapse in 1920, beginning in Japan, spread rapidly to other countries, an economic catastrophe from which some nations never really recovered.

The old saw that "history repeats itself" is thus strikingly exemplified. Despite the interval of years, and they are years of marked and significant economic changes, the experience of England at the end of the Napoleonic Wars, of the United States at the close of the Civil War, and of both countries at the end of the World War afford astonishing parallelism. In each case, the years of the war, except perhaps the early months, were years of economic activity, full employment, and a large volume of production. Commodity prices were rising and speculation was active. Profits were high and business failures few. The years were generally described by contemporary writers as prosperous. After Waterloo, after Appomattox, and after the Armistice there were temporary booms with prices soaring and wild speculation. But in each instance, a catastrophic economic crisis

soon followed. Speculators sought markets for their unwanted goods and prices fell with amazing rapidity. The activity relapsed into dullness, and the nation sank into business depression with idle mills, widespread unemployment, and many business failures.

The cases are sufficiently numerous and the records sufficiently reliable to justify the historical proposition that, while at war, nations have been seemingly prosperous, their workers fully employed, and their industries active; but that the declaration of peace has brought, within a short time, a marked recession, introducing a period of business depression which may be prolonged.

It is significant that such an hypothesis does not demand that the penalty of economic distress be paid only by the vanquished nation. Strangely enough, the record shows that often times the victor has suffered more severely than the defeated nation. For example, a widespread economic crisis developed in 1873, soon after the culmination of the Franco-Prussian War. Germany, the victor in the war, was probably the most distressed of all nations, whereas France was barely touched by the general malaise. Nor can one, comparing the economic conditions of England and Germany in the decade of the twenties, make any demonstration that the victor had much the better of it. On this point, it should be noted that the vanquished nation usually has certain payments which it is required to make in accordance with the terms of the peace. From the economic point of view, there is little difference between shooting away economic goods or donating them to another nation. In a sense, the economic processes of war are continued throughout the period of reparations. This tends to maintain in the vanquished nation those conditions which engendered the prosperity during the war itself. Furthermore, the nation making such reparations has thus more opportunity consciously to adjust and adapt itself to peace conditions by a process of gradual change. In contrast, the victorious country finds its position suddenly reversed. Instead of shooting away part of its product, it now receives additional income as a gift. Individuals have been quickly demoralized under similar conditions.

As a brief footnote, it should be added that the war-and-peace forces may also greatly affect the so-called "neutral" nations. Political neutrality does not emasculate international economic forces. During the World War, the Scandinavian countries, though politically neutral, reflected the war prosperity of the belligerents and unfortunately were dragged down into the general subsequent depression. Sweden and Switzerland suffered along with the rest of the world during the early twenties. Neutrality does not provide a complete protection from the prosperity-depression pattern.

What are the underlying forces which have created this economic pattern so consistently? Why have nations seemed so prosperous, when much which they were laboring to produce is going up in smoke or down to the

bottom of the sea? And why, when the wastes of war ceased, did depression appear to be inevitable?

The answer could cover the detailed operations of the entire economic system, but it is necessary to mention only the major forces. The great burst in activity stems naturally enough from the requirements of war itself. A new industry is created; and a gigantic new customer suddenly appears. Certain business enterprises are transferred bodily from their normal pursuits to the manufacture of war materials, leaving the field to their erstwhile competitors. Excess capacities disappear. A large number of workers are shipped off to nonproductive war-making, thus greatly benefiting those remaining at home by removing themselves from the competition for jobs. This small number of remaining workers, stirred by patriotic and other motives, succeeds in maintaining the quantity of the output without their brothers' aid. It is not surprising that, in every month between 1915 and 1919, production was above "normal," although in 1918 there were nearly five million men under arms. Furthermore, the government enters into many economic markets to make purchases. And since the government is not dominated, at such times at least, by strict motives of economy but rather by an overwhelming desire to make sure that the war be written down in history as a victory, it has not always bargained carefully with the business specialist. The win-the-war motive is helpful in certain other respects making for this apparent prosperity, such as reducing labor troubles, permitting extensive government regulation of the distribution of goods, centralizing transportation facilities, and bringing cheap labor, especially women, into the market.

As a concurrent development, wars have usually brought inflation and rising prices. It is theoretically conceivable that a war might be financed entirely from income, through taxes so arranged as to reduce the volume of consumption while increasing the volume of production. Napoleon's wars did not create a large national debt because he met his needs from the current income of his subjects, and by immediate levies upon defeated areas. But with the high cost of more recent war-making, this is only a theoretical possibility, and is certainly not in accordance with the practice of modern governments. Actually, the extraordinary costs are met in large part by either currency or credit expansion. In this country, during the Civil War, the currency was greatly expanded through the issue of greenbacks; during the World War, the banking system created a great volume of credit. Such inflation, by increasing the amount of purchasing power without changing the quantity of available goods for purchase, tends to cheapen money and raise prices. It is significant that the three outstanding peaks in the level of commodity prices in the history of the United States were all at the close of wars—in 1815, 1866, and 1920. This increase in prices has a very definite effect on business conditions. Just as an individual

hastens to buy his automobile if he hears that the price is to be advanced in the near future, so the alert businessman times his purchases according to price movements. If prices are rising, the manufacturer hastens to obtain raw materials, the retailer fills his shelves with goods, and the careful housewife makes certain that her sugar barrel is full.

Rising prices, while thus stimulating regular purchasers, also arouse speculators. Persons enter the markets who have no desire to use or consume the products themselves, but purchase with the intent to resell in the same market at a later date, and at a higher price. To the manufacturer, the demand from the speculator is just as real as that from a bona fide consumer, and his production is further stimulated. Rising prices, therefore, create industrial activity, and the inflation which caused them must be regarded as a major force in bringing about these conditions which we call prosperity.

So the war has brought prosperity. The mill wheels are turning; the workers are employed; the pay envelopes are full; and dividends are paid regularly. Of course, we must assume that the country is not seriously invaded, and that there are no painful incidents such as a rigid blockade. There are sure to be some slight inconveniences, but even these may have their silver lining—for example, the man who discovered the real taste of coffee when his patriotic fervor plus high prices reduced his usual quota of sugar per cup. Occasionally, the effects of war are extremely severe, as witness the distress of New England during the War of 1812, because of our nation's self-imposed embargo, but these have been exceptions to the general pattern of war history.

The cause of the prolonged period of prosperity during war-making lies primarily in the extraordinary increase in consumption, particularly war materials, paid for by means of currency or credit expansion. The war destruction prevents the accumulation of any deleterious surplus, and permits a volume of production which might, in normal times, destroy itself.

The obvious conclusion from the argument thus far is that a wise country should keep a comfortable war under way all the time. We might even make use of the newer statistical techniques to control the activity at the front in such a way as to give us the maximum of prosperity in the rear. Those who have worked so hard on plans for the stabilization and steady expansion of production and prolongation of prosperity have failed to realize that these objectives can easily be obtained if only General Headquarters would carefully scrutinize the latest index numbers, sending an additional army corps to the front with every decline in the index of production of say 2 per cent, until the recession in business had been halted. If the rate of expansion seemed to be threatening the maintenance of the prosperous level, then all that is necessary is to withdraw men from the front until the threat of excessive prosperity is removed. What could be

simpler? It is probable that more tenderhearted persons can use these same theoretical grounds as the basis for some solution on a higher plane, such as the holding of mass Olympic Games during periods of depression, or even the use of a fluctuating WPA program.

But, to return to our proposition: if and when, by some mischance, the war is allowed to terminate, there is a depression. What causes it? Must war inevitably be followed by economic distress? The collapse is the logical result of the forces which caused the prosperity. The inflation is never permanent, for prices do not rise forever. The turning point is usually reached rather quickly after war ceases, though there may be a few months of excited speculative activity. However, government orders and expenditures are inevitably reduced. Falling prices, especially when they are as sharp as in 1815, 1866, and 1920, afford no encouragement to business. Purchases are delayed. Stocks on hand are dumped on the market. Banks and other creditors press for payment of loans. Unemployment appears and reduces the purchasing power of the community, further cutting into business activity. Mills are idle and markets are dull. Dividend checks are reduced or never sent. The social effects of such a period on health and happiness are immeasurable, but such indicators as the marked increase in number of suicides in 1921 over 1919 and 1920 cannot be disregarded. This postwar depression often lasts for several years. In the case of South Africa, the recession after the Boer War began in 1903, and there was no revival until 1909.

The sudden withdrawal of the great beneficent new employer and customer is the major factor here. The workers who have been away at the war return to find their places taken by others or by laborsaving machinery. The factories which were transformed into creators of munitions and other war paraphernalia return to their peacetime occupations to find their places taken by other producers. Exporters turn eagerly to their foreign markets only to discover that other countries have taken over their connections. Furthermore, new construction, changes in technique, and improvements which have been delayed by the war are now developed rapidly, and their influence is felt when they are least wanted. Contracts let for new industrial buildings in 1918 and 1919 involved more floor space than in any year since. These buildings, if completed at all, were ready for use when we were entering, or already in, the depression of 1920-21. Wars do not come often enough to impress upon businessmen the hazards of immediate postwar expansion. It is inevitable that the disappearance of the particular market for which so much of the economic system has been reorganized will cause many points of maladjustment.

There is one further element disclosed by the historical record; namely, that the war process may bring about some structural change in the nation's political or economic system, requiring a whole series of adjustments in

the postwar years. The change might have been inevitable, in the course of time, but the war at least affected its speed and timing. The Russian and German political revolutions were both products of the World War. The shift of the United States from a debtor to a creditor nation, the disappearance of gold as the accepted world monetary base, the changes within the British Empire in the relationship between mother country, the colonies, and the Dominions, the creation of new states in Central Europe—these and many other structural changes disturbed the smooth functioning of the economy in the post-World War years. On the historical record, one must accept war as a major reorganizing force, and one which does not necessarily do a neat and quick job. It has often left areas of disturbance which have taken many months and often years to become adjusted.

The pattern which I have outlined is based on the war record of the last several centuries. The extent to which the proposition is valid depends in large measure on the relative importance and duration of the war and the degree to which the involved nation concentrates its economic energies upon victory. For example, our war with Spain was so sudden and brief an incident that its economic effects were slight, and one would not be justified in laying the recession of 1900 at its door, although it is worthy of note that there was a mild downturn in that year. On the other hand, when we entered the World War, we disregarded our traditional principles of *laissez faire*, of the rights of private property, and even of free speech. We introduced price fixing, government control, priorities, conscription—in fact, a virtual reorganization for a single purpose, to win the war. Such a complete transformation could not help but have notable economic consequences.

War-making has become a most serious business. Once upon a time, nations fought as two women might bicker over the back fence, without any serious delay in the process of hanging out the clothes. Today, the neighbors are called in and forced to take sides; elaborate and costly instruments for conflict replace those given by nature; and the hanging of clothes is completely forgotten. This increasing concentration of the life of nations on the single purpose while making war, means that the economic consequences of wars are becoming more and more severe. The depression after Waterloo centered in commercial and financial circles, and the bulk of the population was little affected. But the effects of the depression of 1920-21 were felt throughout many countries, from north to south and east to west—farmer, laborer, manufacturer, worker, broker, and consumer were all involved.

It is not enough to recognize this trend in considering the present war. The change in the nature of war-making is too great, and the consequent economic problems shift to an entirely different level. The historical analysis with its prosperity-depression pattern regards war as a dislocating factor

requiring major adjustments and readjustments. The economic effects of past wars have been chiefly indirect, the actual war processes being geographically localized and the destruction being chiefly that of war materials and men. The present war is directly destructive of the basic wealth of the nations involved. There is no limited battleground, and evidently victory is to be achieved by the greatest destruction of the productive facilities of the enemy.

The old pattern—prosperity and depression—implies a swing around some sort of normal trend line. But if one introduces devastation and destruction on anything like the scale now experienced, the concept of "prosperity" during the war, always somewhat ironic, becomes unusable. And the concept of depression thereafter must be strengthened by some word implying a breakdown, a disorganization, a tragic poverty, although the reconstruction activity may meet some of the statistical criteria of prosperity, just as happens during war periods. For the belligerent nations, such a condition seems the inevitable result of any prolonged continuance of the present conflict. There have been devastated sections before—battlegrounds, floods, earthquakes—but there have been other wealthier areas able to help them to rehabilitate themselves. But if all of Europe continues the destruction of capital and human beings, it is impossible to see any easy recovery from the setback. The reconstruction will have to be carried on in terms of exceedingly limited resources, and that will require a strong centralized organization for planning and control. There will have to be strong governments to maintain order. It is conceivable that some group or nation might take care of itself, at least temporarily, by exploiting the remainder of Europe, but the resources to exploit are being destroyed daily. Such a picture is so far beyond the experience of history that one can only shudder at it. Our modern economic system, our methods of life, are built on capital accumulation and the productivity of such capital. Its destruction cuts from under the whole basis of our living standards. Perhaps Europe will go through the slow, hard processes of accumulation and development of the pioneer days in new countries. There seems to be more likelihood of the "strong government" approach in all of Europe, adapting and perhaps modifying the patterns of Russia or Germany. From the point of view of American national policy, one basic problem will be that of the degree to which we shall participate in the rebuilding of Europe. The answer may depend in part on the outcome of the war. But regardless of that, we cannot forget the extent to which we provided capital for rebuilding after the last war, and were left with frozen and then evaporated assets. After the war, Europe will have even less promising sources for repayment.

The historical pattern may have more significance for the United States than for the belligerent nations. If we enter the war, we may also see some of the devastation at first hand, but it is difficult to imagine it reaching the

tragic extent of that in Europe. It is, of course, not impossible that the world is facing a long period of conflict, intermittent or continuous. The extent to which the historical pattern is of significance in the United States depends to some extent on the duration of international unsettlement and whether the peace will be a peace in fact or not. I know of no period in the history of the world where, on a quantitative basis at least, the future has been more unpredictable. This very condition requires us to make even greater efforts to meet eventualities. If we continue our present status, the war for us will clearly be a matter of dislocation rather than destruction, assuming a relatively short war. The problems for us may then be greater than those in the post-World War period, but they will be much the same in kind.

It is not a new thought that the postwar strains can be eased by means of careful planning and continued government participation. The home-stead program in this country after the Civil War was devised to reduce the pressure on the labor markets of returning soldiers. However, the volumes of discussion and debate which were published in 1918 concerning the problems of demobilization were of little avail in the face of the actual circumstances. Not a single nation escaped the depression, regardless of the wisdom of its statesmen.

There is no way of altering the fact that the economic machine must run differently in wartime and in peacetime. Factories must be used for different purposes. The working force must be differently distributed. Nevertheless, there are choices to be made in war-planning and one of the important factors should be peace-planning. It is most encouraging to know that such thoughts are in the minds of the Defense Commission as it proceeds with its difficult task. It may be that we can deliberately postpone some economic activities, such as normal public construction, to provide a backlog of requirements for the day when the economic machine begins to stall. After the World War, England strengthened herself with a tremendous housing program. In our own case, it was a matter of good fortune that the automobile industry had reached maturity and was ready to move into its present place among our leading industries. Much can be done by private industry to be ready with new products and uses against the day when the armament pressure slackens on our economic machine.

We are on a path from which the government, in its position as a dominant customer, must not suddenly withdraw. Economically speaking, wars do not begin with the declaration of war, assuming that there is one, but with the construction of armament and the accumulation of war materials. Whether the war materials are destroyed or accumulated for future use is not the significant economic point, but rather that economic energy is diverted to war production. Similarly, wars cannot end, economic-

ally speaking, with the signing of the peace. Just as we have accepted the dominant interest of government in war preparedness, we must accept it as directing the adjustments in the postwar years. The answer is not merely to liquidate it as the great war customer but to continue it during the hard years as the great peace customer.

The extent to which "strong government" in the United States will be required when peace comes is a ratio of the extent of dislocation to the amount of advance planning with which we meet the peace. A very conscious planning effort undoubtedly will lessen the extent to which government might need to participate in the readjustment period, and while it now seems rather dreamlike to envisage whatever may be the new kind of a peaceful world, economists owe a profound duty to their calling to attempt to think about it. I even suggest it might be done on an organized basis with an organization of government leaders, businessmen, and economists who would *now* attempt to encompass, in an advisory way, the kind of problem we shall eventually have to face.

This same thought was forcibly expressed several weeks ago by Mr. William L. Batt, Deputy Commissioner of the Industrial Materials Division of the National Defense Advisory Commission, in a speech before the American Society of Mechanical Engineers. He spoke as follows:

It seems to me essential that we immediately create a small group of the ablest men in the country who would be charged with studying these long-range problems and working out solutions in advance. They ought to be set off in a corner by themselves, instructed to forget all about the immediate problems of procuring war material, except as it affects the future national economy. They should set to work now on the preparation of an industrial demobilization plan. Nations have spent decades preparing plans for the conversion of a peace-time economy to a war-time economy. So far as I know, nobody has seriously undertaken the preparation of plans for the opposite process . . . converting a war-time economy back to a peace-time economy. That might involve the discovery and development of new processes and new products for civilian consumption that could be manufactured on the same machines that now are turning out or preparing to turn out products that are useless in times of peace; plans for the absorption of our newly trained labor in peaceful pursuits; the fundamental policies of a foreign trade policy in a world that will be vastly different from that with which we have ever dealt before.

This group would need inventors and research scientists, trade experts and fiscal experts, men of practical knowledge and great vision. They should devote their entire time to the formulation of the best plans that could be evolved for the utilization of our entire resources for the improvement of our standard of living, for the protection of our national economy from the repercussion not of war but of peace, for the conversion of the processes of economic waste to the processes of economic usefulness.

At one point, we must make every effort to avoid and avert price rises such that we will be exposed to the disturbing effects of inflation and subsequent deflation. I doubt if the rapid price rise in the later years of the World War had any appreciable effect on the national output. The economic system was trying to allocate its limited product among customers in the only way it knew. There is no assurance that the process of selection by high price necessarily conforms to the nation's needs. The first step, of course, is to strive for adequate capacity so that no such selection is necessary. But if and when it is, we should be prepared to do it by other methods

of determining priorities, rather than by permitting price spirals to start. Fiscal policy will also be of great importance in determining the course of prices. One of the major objectives of the tax program should be to affect purchasing power in such a manner as to ease the adjustment to an expanding armament and perhaps even a diminishing consumer goods output. If we can keep prices under control, the postwar years will be that much easier.

But the greatest statesmanship is required in the area which I have called "structural changes." The war process will inevitably threaten our habits and institutions, both externally and internally. The processes of social change will be greatly accelerated, and may be guided by what appears to be immediate necessity rather than long-run desirability. It is futile even to attempt to outline the characteristics of the world ten years from now. But it is extremely important that, in this country, we try to know what we are doing and where we are going. Depressions are always dangerous. We need to do a great deal of thinking and planning before our social and economic structure is again threatened by the strains of a postwar collapse. We are all well aware of the tremendous human and social cost of war-making. It is ironic and tragic that we must also recognize that the postwar period, in spite of the blessing of peace, can also be disastrous.

DISCUSSION

WESLEY C. MITCHELL: I hope that the authors of the previous papers will forgive me if I devote less attention to the details of what they have said than to their efforts to combine certain results of economic, statistical, and historical research in treating their themes.

Economists have been uneasily aware in varying degree of the relations of their work to the historical evolution of society. Some, like Adam Smith, have presented their problems in an historical setting. Some have at times gone to the length of arguing that a valid and useful economics can be developed only by basing generalizations directly upon vast collections of historical data. At the other extreme, some have imagined a static state from which all changes in economic organization are excluded. But that has been merely an analytical device intended to aid in clarifying the logic of rational economic behavior among men who live under given physical and social conditions. I doubt whether the most abstract of our theorists would deny that such insights as he can attain into economic behavior are historically conditioned. On the other hand, I should not like to charge any economist, however historically minded, with unwillingness to admit that some logical scheme of behavior is involved in the economic institutions prevailing among the communities whose experiences he has described.

Historians on their side have held similarly diverse views about the role that economic factors play in the evolution of society. Between those who cherish the economic interpretation of history, those who stress the influence of cultural heroes, those who revert to the influence exercised by physical environments, and those who hold mystical notions concerning "manifest destiny" in any of its protean forms, there are differences as marked as the differences in the treatment of historical considerations by Smith and Ricardo, Karl Marx and Walras, John Bates Clark and Veblen. But no historian would deny that the way in which men get their food, clothing, and shelter has affected their cultural achievements; and even those who lay greatest stress on these factors would not claim that they constitute the whole of culture with which an historian may fitly be concerned.

Somewhat different problems concerning historical changes have forced themselves upon the attention of statisticians who have worked with time series. Their data are definitely historical records, but records in a form that tempts the user to economic analysis. When a statistician yields to this temptation, he is led to a qualitative classification of historical changes. He finds certain types of fluctuations that recur time after time, while other movements persist in the same direction for many decades, and still other movements are episodic in character, appearing as sudden shifts in the standing of his data that are nonrecurrent, or recurrent in a fashion so erratic that he can find no rhyme or reason in them.

I am well aware that what I have said is a jumble. The troubles the economists have felt in treating the historical phase of their problems do not run in the same terms as the troubles historians have had in thinking of the role played by economic factors. Nor do the issues of time series analysis line up neatly beside the puzzles of the economists or of the historians. There has been no satisfactory meeting of the minds busied with these three approaches to the study of

behavior. Even the differences remain ill-defined. Still less have efficient working alliances been formed between economists and historians, or between historians and statisticians, and the alliance between statisticians and economists has been less fruitful than it should be. Valiant attempts have been made to bridge the gap between economics and history, but they seem to be instructive mainly by their ineffectiveness. The German historical school of economics doomed itself to failure by undervaluing the effort to work out the logic of behavior inherent in different schemes of organization. The economic interpretation of history failed to show how the way in which men make their livings predetermines all their religious ideas, their artistry, and their politics. Communities with fundamentally similar economic institutions sometimes differ widely in other cultural characteristics—as may be noted in the great nations that share the technological achievements of our day. But the ill success of the simple scheme of turning economics into history and history into economics does not mean that we must give up hope of making these two approaches toward the understanding of men enrich each other.

What we may regard as an ideal is an economics that will provide a quantitative as well as a qualitative analysis of the relations among the activities of men engaged in making their livings under the changing conditions that history records, and a history that will illuminate its account of human evolution by showing the ways in which economic activities have been related to one another and to other elements in the cultural complexes with which it deals.

Needless to say, we are a long way from this ideal. But I like to think that these papers represent a type of work that will flourish vigorously in the near future. Our speakers have dealt with the effects of wars, which time-series analysts classify as random perturbations of economic activities. The wars they have treated are historical episodes, and they have made no attempt to sidestep the historical idiosyncrasies of each occurrence. Yet they have been able to show that, different from the others as each war was, each produced economic consequences of the same type. Their reasoning makes clear that the similarity in consequences is not a mere coincidence, but a result that follows from the conditions under which the wars were waged. All this is so cogent that we feel warranted in taking their conclusions as highly significant for the predicament with which we shall have to deal in the year to come.

In short, we have before us specimens of the kind of work that we should like to think of as characteristic of our disciplines. The lesson is not, of course, that what has been is what will be, but that what has been will be unless we learn from past experience how to manage affairs better than our predecessors did. The drawing of lessons from experience applicable to the guidance of present policy is the highest task that economics, history, and statistics can perform, and a task that is most likely to be performed well when all three disciplines work in unison.

R. D. PATTON: The two papers under consideration have dealt with their respective aspects of the general topic in quite distinctive ways. Oliver has presented a concise statistical picture of the major war and postwar inflationary periods since 1790, and has then sought categories into which the presumed

causes of these price movements may be conveniently grouped. Thorp has not attempted to marshal comprehensive statistical data on postwar depressions, but has chosen to deal with more general problems of postwar eras including reconstruction.

Within its more limited scope, there is little to which exception can be taken in Oliver's paper. If it has sins, they are of omission rather than of commission. He has dealt only with the grosser price movements in which precise definition of inflation is of minor importance. Nevertheless, if price studies are to be of maximum value for the guidance of the economy in more normal times, precise definition of inflation is necessary in order that potentially dangerous tendencies may be recognized in their incipient stages.

Thorp has made numerous and significant observations on postwar and reconstruction periods. It is to be regretted that he has not been able, in every case, to present the statistical bases of these observations, nor to suggest the kinds of studies needed to fill the gap. There can be little question that the careful and detailed study of war and postwar economic phenomena offers one of the best avenues to understanding and guiding the peacetime economy.

With respect to both papers, less than adequate attention has been given to structural changes in the economy which are associated with wars. The century and a half since 1790 has been a period of highly developed but evolving capitalism in the Western nations. The changes that have taken place have been the result of tensions between groups and classes in capitalistic society created by the operation of the system itself. In normal times, the favored position of some groups, buttressed by the structure of the system, can be altered by the opposition of others only slowly and perhaps slightly. War emergencies with their demand for unity in order to achieve maximum productive and military effort make an otherwise viscous relationship between economic groups into one that is more highly plastic. It is in this sense that wars are said to set forward the processes of social change. These remarks are based on general observation and must be so commonplace that widespread preacceptance of the fruitfulness of more detailed studies in this field is indicated.

Specifically, the treatment of both war and inflation and postwar depressions would have been more fully rounded had the effect of wars in bringing about structural changes been taken into account. Neither paper completely ignored this effect of wars, but neither gave it due importance. A case in point would be the tendency of war and postwar financial emergencies to lead to the taking over of new powers by governments from the hands of private financial institutions. If this tendency can in fact be shown to have existed, it has an obvious value in analyzing the causes, nature, and possible remedies for inflationary price movements. A clearer case would be the effect of wars and war-inspired technological advances in bringing about greater concentration of industrial production in the hands of monopolistic or quasi-monopolistic groups of firms. This particular field, however, lies outside the scope of the two papers being discussed.

After considering these papers, as well as other aspects of the economic consequences of war, one can only conclude that further, more detailed, and more inclusive study of these consequences is not only warranted but urgent. If, in a democratic nation, we may regard war as a pathological state of world society

and not as a normal instrument of national policy, then research into the economic causes and consequences of war bears much the same relationship to normal, peacetime economy as research into the nature and consequences of disease bears to the normal, healthy functioning of the human body.

C. O. HARDY: It should be pointed out in connection with the history of postwar depressions that typically it is not the termination of hostilities that marks the turning point from a high level of economic activity to prolonged and deep depression. Activity was higher in 1919-20 than it was in 1918. The wars of the middle of the century were followed by a long depression, but it did not begin until 1873. Likewise there was a brief postwar boom after the close of the Napoleonic Wars. This suggests that the critical factor may not be the transition from peace to war, but some typical features of postwar policy, such as the transition from deficit financing to liquidation, or the attempt to restore a prewar monetary standard, or measures of trade control growing out of the intense nationalism which always characterizes postwar periods.

In any case the cure for the evils of postwar stagnation must probably be found in postwar policy rather than in policies initiated during the course of the war. Advance planning is necessary, but such plans must be very tentative until the outcome of the war is known.

CALVIN B. HOOVER: I would like to support the proposal of Dr. Thorp that a group of economists should be devoting their time to a consideration of ways and means by which new investment in the economy might be stimulated to take the place of production of armaments at the close of the present war. I am convinced that if concrete measures are not taken to insure the use of productive capacities now employed in war uses, we shall be confronted after the war with an unemployment crisis even greater than that of 1932. Such a crisis would be a tragic admission of the shortcomings of economists. To give practical force to the suggestion of Dr. Thorp, I would recommend that the Program Committee for the next meeting of the American Economic Association devote a considerable portion of the program to a consideration of this problem. I would further recommend that this be done in successive meetings of the Association, since this problem and problems of a similar nature are bound to continue in existence.

SOME ECONOMIC PROBLEMS OF WAR, DEFENSE, AND POSTWAR RECONSTRUCTION

SOME ASPECTS, NEAR-TERM AND LONG-TERM, OF THE INTERNATIONAL POSITION OF THE UNITED STATES¹

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I

Many persons vitally interested in sound international relations are frequently disposed to assume that a higher level of economic prosperity in all countries would be maintained if trade barriers were largely removed. It is undoubtedly true that the erection of postwar agricultural tariffs, together with the increasingly protectionist policies of primary producing countries, the reparations payments, and the unsound policies pursued with respect to foreign lending, were important factors intensifying the great world depression beginning in 1929. While this may certainly be granted, it would be a great mistake to assume that sounder international economic policies of the character referred to above would themselves insure an avoidance of serious depressions. Indeed, one can go much farther and assert that even in a world which was completely under one political sovereignty the fundamental factor producing depressions would still be present; namely, the fluctuation in the rate of real investment.

A second point to be noted is that in laying plans for a durable peace it would be very dangerous to overlook the threat to stability which would arise in case we had a recurrence of deep depressions.

It is increasingly the view of many economists that the depression starting in 1929 is in very large measure responsible for the present plight of the world. There was a very good chance—though no absolute certainty—that in the absence of the Great Depression a solution might have been found for the central problem of Europe; namely, the place of Germany in international relations. Despite the mistakes of the Versailles Treaty, progress was being made toward a solution in the relatively prosperous years of the late twenties, and could this prosperity have been maintained on a fairly high level, it is not unreasonable to assume that progressively a solution would have been found and war thereby averted.

The thesis can therefore be advanced with a good deal of reason that the really acid test of international economic co-operation runs in terms of deliberate international policy with respect to the control or moderation of depressions.

With respect to the United States, it may be asserted with considerable confidence that this country could make no greater contribution toward the

¹ Presented by Arthur R. Upgren.

solution of the international political as well as economic problems than that of achieving a high degree of internal economic stability at a level of fairly full employment of labor and other resources. It is a fact that the extraordinary instability of the American economy presents one of the most serious problems confronting Europe. The Great Depression itself was, of course, the result of the interplay of a great many factors, partly internal and partly international, but there can be little question that the tremendous investment boom of the twenties in the United States (and in other countries fostered by American foreign loans), the succeeding high degree of temporary saturation, and the ensuing collapse in the output of fixed capital goods, particularly in this country, was the central core of the great world depression, and determined mainly its intensity and duration. A bad international setup, of course, magnified the impact upon the outside world, and this impact in turn reflected itself back upon our own country in a cumulative fashion. Thus, as always in a depression period, it is quite impossible to unravel the interplay of cause and effect relationships. But through it all it is important to see the internal situation in the United States which would have created a profound depression regardless of the international setup.

Europe and also the primary producing countries from whom we import so heavily, and whose prosperity or depression is therefore in large measure a reflection of our own, have every reason to fear the impact of America upon world affairs if we are to continue (a) a high degree of economic instability or (b) a chronically depressed condition or (c) as in recent years, a combination of both.

One of the most striking facts about the foreign trade of the United States, especially its imports, is the very close, in fact extremely close, relationship between foreign trade volume and levels of industrial production at home. This can be illustrated in a single example by the behavior of United States imports in 1938 in contrast to 1937. The year 1937 was the year of greatest economic activity that the world generally enjoyed in the decade of the thirties. In the year 1938, however, the United States fell into an economic depression that was extremely sharp and it resulted in a great decline in industrial production. Although this decline of the United States adversely affected the rest of the world, levels of industrial production elsewhere were generally well maintained because of the sustaining force of the rearmament programs of other industrial nations. Consequently, the trade figures for the United States are to be interpreted in light of the sharp economic recession at home and sustained industrial activity abroad. In 1938 trade figures for the United States show that our exports were 3.1 billion dollars compared with 3.3 billions in 1937. In contrast, however, our import volume fell from 3.1 billion dollars to 2.0 billions, or by no less than 1.1 billions. This large fall in import vol-

ume was due to the fact that the great decline in industrial production at home—a decline of over 20 per cent—resulted in a greatly reduced draft upon the rest of the world for its goods, particularly for its raw materials used by the industrial plant of the United States.

This example, taken from the experience of a single year, is indicative of a general situation that has prevailed over the two decades since the end of the first World War. If the volume of imports of the United States in the years since 1921 are reviewed, it is found that the physical import volume of the United States moves exceedingly closely with the level of internal industrial production and national income deflated by the index of the cost of living. Moreover, this relationship has prevailed, as has been indicated, over good times and bad and almost as well in the face of sharp tariff increases, the tariff *decreases* of the trade agreements program, and in the face of violent currency derangements. It suggests most emphatically that there is grave possibility that policies of isolation and nationalism on the part of much of the rest of the world might be continued if the economic house of the United States cannot be put in order. Our contribution to international economic instability in the decade of the thirties has been a substantial one. If we are to contribute to a more ordered world in the future, our great contribution can be the large import market that we could provide if we could adopt appropriate antidepression policies at home that would maintain reasonable levels of outputs for our own production. Too often it is thought that sound international economic relations depend directly upon a healthy state of affairs in international economic co-operation. Too seldom is the importance of economic vigor and health at home considered as the strongest single way in which the United States can contribute to a better world order.

II

In the nineteenth century, and indeed until the breakdown of the international price system in the great depression of the early thirties, international trade, while more or less hampered by tariffs, nevertheless extended far beyond political boundaries and was relatively little affected by political power. During the last decade the world has, however, become increasingly broken up into more or less watertight trade area compartments. In particular the trading policies of the totalitarian states have fostered a high degree of self-sufficiency in the areas brought within their sphere of influence. And of course the war has now cut off most of the continent of Europe from trade with the Western world.

The prospect for a satisfactory political organization of Europe is not bright, regardless of the outcome of the war. Europe in our generation will not easily be able to achieve a satisfactory political settlement. If the outcome of the war is such that Germany will dominate the continent of

Europe, this would entail the continuance of autarchic trade policies, resulting in largely cutting off this area from trade with the rest of the world. Barter deals no doubt would be made where they could be effected advantageously, but general international trade intercourse between a German-dominated Europe and the rest of the world would be a thing of the past.

On the other hand, it can reasonably be expected that in the event of a British victory the independent states of Europe will be reconstituted, and that international trade between political boundaries will be on a basis not essentially different from that of the past. Thus the outcome of the war has important implications with respect to world trade, and in particular the trading area available for the United States.

In the event of a complete German victory, including the conquest of the British Isles and perhaps the loss of British India and much or all of the African British Empire, the American trade area would shrivel to include virtually no more than the North American continent and the Caribbean countries. In the event of a British defeat the United States could not single-handedly control the Atlantic and the Pacific Oceans. Our defense would have to be drawn on close lines. It would involve a restricted area, including the North American continent and the Caribbean countries. It would of course include the protection of the Panama Canal and an area say 1,500 miles beyond. But with the defeat of Britain we could not afford to risk far-flung distant outposts.

The economic and trade implications of this limited defense area are rather obvious. The United States does not constitute a powerful economic magnet drawing the countries of South America—that are south of the Caribbean area—into our trade orbit. Their great export products are, with the exception of coffee in Brazil, precisely the products of which we have huge agricultural surpluses and this is also true for two important minerals. The difficulty of integrating the South American countries in the orbit of American trade the first author explored in some detail in an article on "Hemisphere Solidarity" in the October, 1940, issue of *Foreign Affairs*, and these difficulties are explored further in another article in the January, 1941, issue of the same journal entitled, "A Trade Policy for National Defense," by the second author in collaboration with Percy W. Bidwell. Nor should we be able to hold the Far East, Australasia, the Dutch and British East Indies, China, the Philippine Islands, and Japan within our trade orbit. This area in the event of a smashing German victory would increasingly fall, both on military and on trade lines, under the control of Japan and the Axis Powers.

The limited trade area thus left for the United States does indeed contain rich raw materials, and we could in time develop a high degree of self-sufficiency, but it would mean a drastic reallocation of our productive resources. Within this narrow trade area we have an enormously over-

developed agricultural capacity. This would have to be liquidated. We should not be able to escape a very painful process of readjustment. Our economy has developed within a world market, and our trading area cannot shrivel to small dimensions without entailing drastic reorganization and readjustment.

If Britain holds and the British Empire survives, our trade outlook would be very different. With British and American control of the seas a large trading area would be available for this country, even though Germany should retain control of the continent of Europe. Such a trade area would include the British Isles and the whole of the British Empire, the whole of the Western Hemisphere, and the Far East. This represents a reasonably satisfactory triangular trade area, including by far the most important part of our former world trade. Important trade routes would thus be preserved across the Atlantic and the Pacific. In this area, by reason of the market offered in the British Isles, the South American countries could also find their place. And we on our part would import many leading raw materials from the Far East.

The outlook for the United States in such a world would be fairly favorable from the trade standpoint. But in terms of world organization and permanent peace a world divided between a great land power, Germany, and sea powers, Britain and the United States, presents a gloomy picture.

In this brief paper, however, consideration is given mainly to the trade situation, and in particular to the perfectly enormous difference for the United States between a restricted trade area, such as a British defeat would involve, and a trade area including the British Empire, the Western Hemisphere, and the Far East.

III

The near-term international policies of the United States include as their outstanding feature military aid to Britain. Whatever political, military, cultural, and ideological bases this policy may have, its basis is fortified by the crucial trade position Britain holds for a United States interested in Western Hemisphere solidarity.

The point of outstanding weakness in any program of Western Hemisphere economic solidarity is the fact that the Western Hemisphere has large surpluses of agricultural products for which export markets are needed if reasonable prosperity is to be maintained within the hemisphere. We in the United States are familiar with our own agricultural surplus problem. Quantitatively it is the problem of export markets for about 700 million dollars of agricultural products each year. If these markets cannot be secured and maintained, either the United States faces serious economic readjustment at home or a pronounced lack of prosperity not only for agriculture but possibly for industry as well. But if the Western

Hemisphere as a whole is considered, the surpluses of these commodities including two mineral products cumulate to a total of no less than 2 billion dollars. Whatever the rather small proportion may be that United States exports bear to its total production, the proportion for the countries of the rest of the Western Hemisphere is very substantially higher. A curtailment of exports for them is tantamount to economic suicide. Our surpluses are agricultural surpluses of cotton and wheat, tobacco and meat, and mineral surpluses of copper and petroleum, to name but two of the latter class. But in all the rest of the hemisphere, Canada and the Argentine together have even greater surpluses of meat and wheat, Brazil has a large surplus of coffee and cotton, and other countries of the hemisphere have very large surpluses of copper and petroleum. Perhaps the economic difficulties for the hemisphere as a whole can be characterized in the statement that the hemisphere contains two temperate-climate, raw-material producing areas but within itself only one large industrial market, which is of course the market of our country. Any program of hemispheric isolation or self-containment must face the facts of these surpluses. The amelioration of the problem is to be found either in the maintenance of markets for these commodities or in the readjustment of hemispheric production. Any production readjustment, involving as it would huge drafts upon the supply of capital of the United States, would probably result in a centralization of control to a degree which would constitute a threat for democracy, for it would involve not only control at home but a substantial degree of interference in the other countries of the hemisphere. In fact an adequate program of readjustment might well cost the hemisphere its ability to rearm and might even cost the attainment of those ideals for which the program of Western Hemisphere solidarity itself is proposed by its proponents.

A key to the solution of this dilemma is Britain. The greatest absorbing market by far for these huge surpluses of the Western Hemisphere is Europe. In that European market the proportion of Western Hemisphere agricultural surpluses that is absorbed by Britain (in trade terms, the United Kingdom) is striking indeed. Of total hemispheric exports Britain absorbs no less than 62 per cent in the case of wheat, or considerably more than is absorbed by the combined leading countries of the continent of Europe. In the case of meat—a critical export for the Argentine—the proportion of total Western Hemisphere exports to all of Europe that is absorbed by Britain is 90 per cent. In the case of lard, it is 58 per cent; in the case of cotton, tobacco, and corn, the proportion ranges from 32 to 40 per cent, respectively. In fact, coffee is the only important Western Hemisphere export that is absorbed heavily by Europe, exclusive of Britain. Thus if the markets of Europe are to be lost, the damage to the Western Hemisphere trade is very greatly reduced if Britain can be preserved.

Consequently, in the important trade position Britain holds for the Western Hemisphere is found a striking economic reason for the present political and military co-operation with that country. Further, it can be suggested that this policy of co-operation on nonmilitary fronts should also be developed into a long-term policy in order to develop more effective arrangements for the future. Only by preserving a trade area that is even wider than that of the Western Hemisphere and Britain can our economy face the future with assurance. As our military power is built up, a wider horizon than that of the Western Hemisphere must be considered. The place of Britain has been suggested and there are equally effective reasons for the inclusion of certain other areas. Only such a total wider area can provide an adequate measure of security from attack, an adequate mechanism to provide reasonable political justice, and the basis for a prosperous economy for all of its constituent members.

SOME ECONOMIC PROBLEMS IN THE EXPANSION OF CAPACITY TO PRODUCE MILITARY GOODS

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During the past six months there has arisen in the United States a great demand for the munitions of war. In the course of the next five years the military goods and services demanded of and supplied by our economic system are likely to aggregate at least thirty billion dollars and may greatly exceed that amount.

In general these goods and services may be obtained by restriction of civilian consumption, by more intensive utilization of existing facilities, and by construction and use of additional plant and equipment. It is apparent that if there were sufficient capacity to produce all the arms and other military supplies at the rate desired and at prices yielding only a moderate profit, there would be no need for priorities, price controls, and other means of industrial mobilization. The only major economic problem would be the financial and fiscal one. In the present defense emergency, however, there are real problems in inducing the increases in production and productive capacity needed to meet the large current, and uncertain future, demand for military goods without creating substantial windfall profits.

As long as there are unemployed labor resources which can be utilized to increase production it is neither necessary nor desirable to impose general restrictions on civilian consumption in order to enlarge the supply of military goods; we might as well have both "guns and butter" in so far as we can. It does not follow, however, that there are no particular situations in which the restriction of civilian consumption is desirable. If the good in question is urgently needed in the military program and it is impossible or very costly to increase productive capacity to supply the total armament and civilian demand, restriction of civilian consumption is in order. This restriction has already occurred in the airplane and machine-tool industries, two important cases in which the volume and urgency of the armament demand are very great. Possibilities of restrictions loom also in the aluminum and steel industries. In the case of steel, the problem is complicated by the fact that in so many civilian uses steel is an essential, though small, element, so that a given reduction in civilian use of steel would necessitate a relatively large reduction in the value of the product made from steel.

There is, however, another aspect of restriction of civilian consumption. As national income increases, the demand for durable goods ordinarily grows more than proportionately and, in the anticipation of increases in price and possible shortages in supply, the civilian demand may be expected

to expand even more than in normal times. This is not desirable. It would be better for current civilian demand to be directed as far as possible to non-durable goods and services producible without much expansion of plant and to defer part of the demand for consumers' and producers' durable goods until after the peak of armament production. If this can be accomplished, there will be some tendency for such demand to cushion the decline which is certain to follow when the abnormal stimulus of an extremely large government deficit begins to wane. There are of course many other factors to be considered in the problem of the optimum capacity for steel production, but the merits, as well as the disadvantages, of using this possible bottleneck as a means of deferring part of the demand for durable goods, deserve careful and critical consideration.

More intensive use of existing facilities as a means of obtaining the goods needed in the armament program is, in general, desirable policy. In case of industries working single shifts and five or six days a week in normal times, expansion of output can be obtained by changing to two or three shifts and operating a full week. If additional plant and equipment are costly in relation to the value added and if they cannot be constructed quickly, this solution is clearly indicated. In the case of continuous-process operations, such as steel and some of the chemical industries, this means of increasing output is not available to any considerable extent.

The more intensive use of existing facilities involves difficulties because of the higher costs of additional product obtained by means of overtime operation and usually also by means of extra shifts. The same phenomenon is encountered as idle, high-cost operating units are brought into production. Higher prices yield windfall profits on the inframarginal production and are therefore objectionable. To some extent this may be remedied by excess profits taxes and by special contracts at higher prices for the marginal production. This problem, however, has so many ramifications and is so complex that it is impossible to deal with it within the limits of this paper.

In a defense or war emergency the restriction of civilian consumption and the more intensive use of existing facilities may be undesirable or inadequate as a means to provide the things needed in rearmament. This is now in general true of munitions such as airplanes, tanks, guns, ammunition, explosives, and many other items. It is also true of certain types of productive equipment, e.g., machine tools, and of some raw materials, such as aluminum, needed in large quantities in the defense program. In these cases productive capacity must be increased by new construction or conversion of existing plants to armament production.

The expansion of capacity involves the minimum of economic difficulties when the productive plant is highly specialized and not convertible to civilian uses. In such a situation government ownership of the plant will

obviate the difficulties in getting private capital to enter so hazardous a field and will avert some of the troubles in a depressed industry after the armament boom. Government ownership will also make possible retention of these plants as stand-by capacity for a possible future emergency. At the same time many of the advantages of private management may be secured by contracting out the operation of such plants on a fee basis. These facts are given recognition in the current munitions program which involves the government ownership of many plants to be constructed and operated by private industry. It is also possible for private capital to enter the specialized armament industry and to assume the risks involved, and there may perhaps be some advantage in private enterprise providing a yardstick for government-owned plants! But in general, the risk to private capital due to the extreme uncertainty as to future military demand and the prospect of heavy losses in time of peace render the field somewhat unsuitable for private enterprise.

In the cases in which the facilities for producing munitions may be converted to civilian uses, and vice versa (including of course the case in which the same type of product serves both armament and civilian uses), the economic problems in expanding capacity are much more complicated. Most of these arise out of the uncertainties of the future military demand, the fear of excess capacity when the military demand dwindles, and the danger that price increases for such goods may generate an upward price movement in the rest of the economy. There is no question but that the demand for munitions and supplies must be satisfied, and as expeditiously as possible, and that any steps essential to that end must be taken promptly; but it is also true that a careful analysis of the difficulties and some ingenuity in dealing with them may obviate much of the need for drastic action.

The first of these difficulties arises out of the impossibility of predicting accurately the future military demand and the consequent impossibility of determining a price which will yield a moderate profit. Any predetermined price is apt to turn out to be either too high or too low, to result in excessive profit or in loss. Furthermore, the prices at which contracts will be let in the future are highly uncertain. In the abstract, it appears that uncertainty as to the future military demand ought not to be converted into risks for private capital and that instead the government should assume the cost of such capital invested to produce military goods either by direct government ownership or by some type of indemnity contract with the private owner. Economic theorists, however, do no service to themselves or to the defense program by saying, as one recently did, "The necessary arrangements are simple." The necessary arrangements are anything but simple!

Government ownership of production facilities to service the defense program, which are not wholly specialized to such purpose, is objectionable

on several counts. (1) Production can usually be achieved more speedily and more economically by conversion of private plants or by construction of plants in conjunction with others under private management. (2) Government ownership of facilities which will later be converted to compete with private business will cause serious internal dissension just when national unity is of utmost importance. Businessmen have reason to fear that government plants will not compete with them on fair terms, and that they will serve as political clubs, rather than economic yardsticks. (3) Entry of government into many fields of private business will tend toward state socialism—a development which is likely to be inconsistent in the long run with our democratic way of life.

Contracts under which the private entrepreneur is guaranteed against loss of his capital investment are likewise extremely difficult to draw. If the plant is an isolated one engaged only in armament business, such a contract is workable. If, however, the plant is integrated vertically or horizontally with other plants in a single company, problems of cost allocation arise for which there are no definite, correct solutions. And if the plant is engaged in producing civilian as well as armament goods, as it well may be in the interests of efficiency, the problems of cost allocation become of insuperable difficulty. If the indemnity contract carries with it an option on the part of the government to acquire the property, it is almost certain to be unacceptable to the private enterprise, unless the plant is isolated from the other operations of the business and is not apt to become a serious competitor. All in all, the possibilities of the government's relieving private business of the capital risks consequent on the uncertainty of the future armament requirements are somewhat limited.

The second source of difficulty is the fear on the part of private enterprise that the capacity created for defense purposes may cause the total industry capacity to be excessive when the armament demand dwindles or disappears. If there are many producers, this fear of the future will not prevent expansion which per se will be profitable. If there are few producers, the recognition of the ill effects on the industry caused by excess capacity may lead them individually to refrain from increasing their plants. This fear is currently accentuated by the recent attacks of government economists on excess capacity and by the activities of the Department of Justice and the Federal Trade Commission against any restraints on competition. There is here a clear conflict of government policy which operates to impede the defense program, but which cannot be resolved without creating some limited postdefense exemption from antitrust laws for industries with capacity expanded to service the defense program. There is no need here to elaborate on the political obstacles to, or the great potential dangers in, relaxing the antitrust laws. The other solution to the excess capacity problem is to have the introduction of new defense capacity linked to the retire-

ment of an equal amount of capacity in the industry after the peak of defense demand has passed. The possibilities of developing some plan by which the entrepreneur introducing new capacity would contract to retire, or to have some other producer retire, an equivalent amount of equipment, merit serious study. This type of plan might be workable in some situations and, if so, would in such cases facilitate the necessary expansion of capacity for armament purposes.

The third major obstacle to plant expansion is the danger that a price high enough to induce the expansion may generate price increases elsewhere in the economy. This can be met by extending special privileges to plants constructed for defense purposes, taking the form of higher prices negotiated with such plants or the form of a relatively high rate of amortization for income-tax purposes. Such devices may be sufficient to induce the creation of new capacity without much general increase in price.

Even though no particular steps be taken to deal with these difficulties, they will dissolve if the price on military goods is high enough to create a prospect of more than average profits. An attractive profit margin coupled with a high tax on what are truly excess profits affords a simple solution to the problem, but it has the shortcoming of tending to generate price increases elsewhere in the economy where they serve no useful purpose. In the present situation profit margins are generally much narrower than they were in 1917-18 and the stimulus to expanding capacity is consequently less.

Businessmen also react to other than profit inducements. Sometimes expansion in capacity may be obtained by so simple a means as appeal to their sense of patriotic duty in the emergency. If there are few producers in the industry they may be motivated to expand capacity because of the desire to maintain good public relations and to avoid retaliation by government agencies for what is regarded as lack of "co-operation." As a matter of fact it is generally possible to obtain excellent co-operation from industries in which the number of producers is small and the feeling of public responsibility and the fear of offending those in political power are well developed. By and large, the difficulties of getting co-operation from a large number of producers or of enforcing regulations upon them are greater than those encountered in dealing with a few large companies. Thus far at least, the more competitive industries have been a greater source of difficulty in the defense program than the less competitive ones.

To date, industrial mobilization for defense has been motivated by price and profit inducements, special concessions to new capacity constructed for defense purposes, the latent threat of commandeering facilities, the desire for public approbation, the fear of government persecution, a sense of patriotism and a feeling of loyalty to persons charged with responsibility for national defense. Whether such motivation will be adequate for the

future of the defense program remains to be seen. If that program is greatly enlarged, it is likely that formal controls of prices, purchases, and production will assume a much more important role. Even so, it will not be possible to pass over to a highly regimented system quickly. For maximum efficiency it will be necessary to use the system of private business subject to general controls of a fiscal and monetary character and to specific controls at bottlenecks. If our government can devise and administer such controls with even moderate efficiency, it may turn out to be the most important achievement in the history of democracy.

PRICE POLICY AND PRICE BEHAVIOR
MAJOR CONTROVERSIES AS TO THE CRITERIA OF
REASONABLE PUBLIC UTILITY RATES

By JAMES C. BONBRIGHT
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Although this paper is concerned directly only with price-making policies in a particular group of industries—the so-called “public utilities”—it has not been written with the interest of a public utility specialist primarily in mind. On the contrary, it is presented for such light as it may throw on the more general problem of developing criteria of reasonable prices in so far as these criteria are designed to serve the interests of the community at large.

With this object in mind, I shall review briefly some of the major controversies revealed by the current literature on theories of public utility rate control. These controversies go beyond mere disputes about technical details of rate regulation. They reveal fundamental disagreements as to the very objectives of this regulation and hence as to the basic tests by which to judge the relative merits of alternative schemes of rate making. The limits of time, together with the need for simple exposition in a paper that must be listened to and not merely read, lead me to ignore certain serious controversial issues and to interrelate those issues that are to be mentioned by means of a simple scheme of classification. This classification has the advantage of giving a semblance of order to an apparently chaotic list of disputes about the criteria of reasonable rates. But it gains this advantage by the use of an artificial lighting system which gets its highlights by creating shadows. There results an illusion of simplicity which a good treatise would attempt to destroy by the device of cross-classification. A short paper, however, may fairly rely on its audience to supply the necessary correctives.

The Cost-Price Standard as the Cardinal Principle of Orthodox Rate Theory

In order to get a point of reference by which to set off the various disputes as to the standards of rate control, let us look for that single standard which, rightly or wrongly, enjoys the widest acceptance among writers on public utility rates. In the absence of a Gallup poll, I surmise that the cost-price standard, in one of its many versions, would receive the majority vote and might possibly win by a landslide. “Cost” is here used in the modern sense of enterpriser’s money cost and is broadly construed to include whatever return to invested capital is required in order to make the business self-supporting without the aid of subsidies. According to this standard, then, reasonable rates are the minimum rates that will yield a

revenue equal to operating expenses, taxes, and all necessary capital charges.

Needless to say, the cost standard as thus defined still contains serious ambiguities which prevent it from being a definitive basis of rate control. But we dare not attempt to resolve these ambiguities at the outset, since the result would disqualify the standard as the probable winner in our popularity contest. To a large extent, therefore, the consensus of agreement among the doctors is verbal rather than real. Nevertheless, it is significant as indicating a widespread belief that public utility consumers should assume the full burden, but no more than the full burden, imposed upon producers in supplying them with the service which they demand.

Twenty years ago a related but distinguishable standard might possibly have received even wider acceptance than the one just mentioned; namely, the criterion of the hypothetical competitive rate. The argument for this alternative standard runs to the effect that, since regulation of rates is necessary only because of the absence of direct competition, the object of this regulation should be to require public utility companies by government fiat to charge such rates as their own self-interest would lead them to charge if they were subject to the economic pressures of a competitive market. In short, regulation is here viewed not merely as a substitute but also as an *imitative* substitute for competition.

Even today this ideal of a competitive price pervades the literature of rate-making theory and influences the practices of legislatures, commissions, and courts. In recent years, however, it has been attacked so vigorously from many different angles that, in its more uncompromising forms, it would probably be rejected by all but a small minority of writers. The view which now prevails is that, while rate regulation is, in a sense, a substitute for competition, it cannot and should not be a closely imitative substitute.

The Usual Rationale of the Cost Standard of Rate Control

Before turning to those controversies which center on the cost-price standard as applied to utility rate making, it may be worth while to note the rationale by which this standard itself is defended in the literature on public utility economics. Many writers do not deem it necessary to supply any elaborate rationale, since they assume that a system of cost pricing is required by the accepted canons or axioms of sound economic theory. Oddly enough, a readiness to make such an assumption is perhaps especially characteristic of those rate specialists whose training has been that of an engineer rather than that of a professional economist.

Those writers, however, who have undertaken an explicit defense of the cost-price standard have often relied on two lines of argument that are deemed to fortify each other. The first argument is the strictly practical one that if rates are set at less than cost the desired service will not be supplied by private producers; whereas if rates are set materially above

costs, consumption will be unnecessarily curtailed and excess profits may accrue to a favored class of investors. This might be called the *finance* argument for cost pricing.

The second argument, which would apply even to a publicly-owned plant that could supply subsidized service if such a policy were deemed sound, is that public utility rates, in common with the prices of all other economic goods and services, should be fixed at cost in order to secure the optimum rationing of the country's limited supply of labor and raw materials. If, for example, the cost of supplying electricity to domestic consumers is found to be four cents per kilowatt hour, a rate of two cents would be bad because it would lead to a wasteful overuse of the factors of production; whereas a rate of eight cents would also be bad because it would preclude the use of services that would confer upon consumers benefits in excess of production costs.

This *optimum rationing* defense of the cost-price system is too familiar to economists to require further exposition here. I may merely add that most writers on public utility rate making have not scrutinized it nearly as closely as have many of the textbooks on general economic theory. One question, among many others, which is usually ignored is whether the "optimum rationing" defense does not conflict with that more obviously practical defense which I mentioned previously; namely, that prices must be fixed at cost in order to attract the necessary capital. A conflict would seem to arise because the latter defense identifies "cost" with enterpriser's outlay, whereas the former defense identifies "cost" with the net social sacrifice imposed upon the entire community by the construction and the operation of the plant. More will be said on this point in a later part of my paper.

Classified List of Controversial Issues

Starting, then, with the cost-price standard as the point of departure, we may now note the following five classes of controversy as to the proper basis of rate control: (1) disputes as to the use of original cost of plant construction versus current replacement cost as a rate base; (2) disputes as to the proper allocation of capital costs to the various time periods in the life of the durable assets; (3) disputes as to the wisdom of departing from a strict cost standard of rate making in order to encourage managerial efficiency; (4) disputes as to whether rates should be adjusted so as to cover total costs including overheads, or whether they should be based strictly on marginal costs; and (5) disputes as to the validity of the basic philosophy of the cost-price standard, when viewed as a device to secure the optimum rationing of the country's economic resources.

1. *Original Cost Versus Replacement Cost.* I have already noted that the cost standard of rate control is an indefinite standard because it can be interpreted in a number of different ways. One of its ambiguities has given rise to the most familiar and most long standing controversy in the

entire field of rate regulation; namely, whether the cost of the service should be measured by reference to an adequate return on the original construction costs of the properties or whether rates should be based instead on hypothetical costs of replacement, determined as of the time when the rates are being set. Most of the current literature on public utility regulation indicates a decided preference for some type of an original cost rate base. This preference is based partly on grounds of greater ease of administration and partly on the ground that it is better adapted to the maintenance of corporate credit. It therefore emphasizes what I have called the finance argument for cost pricing rather than the more sophisticated "optimum rationing" defense. Even today, however, the replacement cost principle receives vigorous support from a minority of writers, most of whom defend it on the ground that it conforms to the ideal of a competitive price.

Without expressing here any opinion on the merits of this controversy, let me note that, among the academic specialists though not among the lawyers and public utility representatives, the issue has been greatly narrowed during the last few years. The debate is now between those who favor a *depreciated* original cost rate base and those who favor the standard of cost of replacing the *service* rather than the standard of cost of reproducing a substantially identical plant. Oddly enough, the two alternatives that have been almost universally rejected by the experts (undepreciated original cost and identical reproduction cost) are precisely the standards that still have the firmest support in doctrinal law.

2. *Disputes as to the Proper Distribution of Capital Charges Among Various Time Periods in the Life of the Enterprise.* Because a large part of the costs of supplying public utility services consists of capital charges on long-lived plant, the question how these charges should be allocated to various periods of time is often of crucial importance. One aspect of this question is now causing public service commissions and company officials more concern than any other single problem of rate regulation: the proper treatment of depreciation, including obsolescence. The old system of retirement-expense accounting, whereby the companies make no allowance whatever for depreciation save for a small retirement reserve, is today in utter disrepute and is clearly on the way out. What will take its place, however, is still an unsettled question, although straight-line depreciation is probably still the popular favorite. There is a possibility that the practice of amortizing capital investment more rapidly than would be required by any conventional measures of actual depreciation—a practice which finds many precedents in publicly-owned electric plants—may be urged even for private companies. Orthodox writers, however, object to this procedure on the ground that it violates the principle of service at cost,

by imposing rates above cost on early customers in order to furnish service below cost to later customers.

A related question concerns proposals to make rates more flexible by means of rate reserves or other financial devices whereby rates may be greatly reduced during periods of business depressions and raised during periods of prosperity. These proposals received considerable attention while the depression was with us. But, like the situation of the farmer with the leaky roof, they have again given way to the more insistent problems of the moment.

3. *Controversy as to the Wisdom of Departures from the Cost Standard Designed to Encourage Efficiency of Management.* The significance of this controversy can be seen by reference to a supposed dual function of the system of competitive prices. The first function is to bring prices into accord with production costs. But the second function is to bring pressure on producers to reduce these costs themselves to a minimum by efficient operation and by taking advantage of all progress in technology.

Impressed with this second function of a competitive price in a dynamic economy, many writers have decried the attempt to make the rates of any company correspond to its particular production costs, since such an attempt is bound to discourage efficiency of construction and operation. Rates set precisely at cost, so it is argued, are sure to be high rates because the cost will be high. Indeed they are likely to be even higher than such rates as an unregulated company would charge in the interests of maximum profits.

The late President Hadley and Professor Philip Cabot have urged this point of view as a reason for abandoning any attempt to regulate rates by reference to a standard of reasonable profits. Other writers who have not accepted their proposed solution of almost complete laissez faire have nevertheless favored some scheme of rate control designed to reward efficiency and penalize inefficiency. One of these schemes—the so-called "Washington Plan"—has actually been applied to the electric company serving Washington, D.C., and has been recommended for adoption elsewhere. President Roosevelt's much debated public yardstick plan is an attempt to meet the problem in a somewhat different way.

Here, as elsewhere in this paper, I have time for only the briefest comment on the point at issue. No one who is familiar with public utility regulation in actual practice can deny the danger that a cost-price standard of rate making will lead to inefficient performance. It is nevertheless an open question whether this danger can best be guarded against by a program of rate control which includes a scheme of money rewards and penalties or whether it can be met more effectively by other devices of social control.

I am inclined to think that the problem here presented is coming to be regarded as both the most important and also the most baffling problem in the entire field of public utility regulation—at least so far as concerns utilities other than those concerned with transportation.

4. *Disputes as to Whether Rates Should Cover Total Costs or Marginal Costs.* No one of the controversies reviewed so far, not even those concerned with proposals to depart from a strict standard of cost price in order to encourage efficiency, involves more than a moderate deviation from the principle of service at cost. We must now note, however, that the basic principle itself has not been free from attack. Indeed, it has been attacked, from three different angles, by writers who disagree among themselves as to the proper alternative basis of rate control.

The first of these three positions is that, in utility rate making, the cost standard should be applied as the determinant only of general rate levels but not of the specific rate schedules or rate structures.

The second position is the diametrically opposite one; namely, that individual rates should be based strictly on marginal costs, even though the total resulting revenues may be more or less than enough to cover total costs.

The third position, which is the most radical of all, is that neither total money cost nor marginal money cost is a sound criterion of desirable rates, and hence that an entirely new philosophy of rate making, which rejects all of the traditional assumptions of equilibrium theory should be developed.

Needless to say, I have stated these three positions in their extreme forms—forms so extreme that they do not faithfully reflect the views of more than a tiny minority of writers and of practical rate specialists. Nevertheless, I think they are fairly good caricatures of three current philosophies of rate making.

Leaving for later comment the truly revolutionary third position, let me now discuss the first two together, since they involve merely different proposed solutions of the same problem. The problem arises because the cost-price system, if offered as a complete standard of rate control, demands the attainment of two objectives that appear to be in conflict when applied to most public service enterprises. (Actually, there are more than two, but I ignore this fact for the sake of simple exposition.) According to the first objective, the rates of the enterprise in question must be just high enough to yield total revenues equal to total production costs. But according to the second, each component rate must equal the specific cost of supplying the specific service to the specific consumer. This specific cost is usually identified with marginal cost. But only by a rare coincidence will rates equal to marginal costs provide revenues large enough on the one hand, and not too large on the other hand, to cover the total costs of production including

all overheads. With several types of public utilities—especially with central electric plants and railroads—the conventional assumption is that rates set at marginal cost will usually fail by a wide margin to cover total operating expenses plus capital charges. Hence, the fixation of individual rates on a cost basis is deemed impossible in the absence of a government subsidy. Here, then, is a dilemma; and the question arises, which horn should be chosen?

The more orthodox choice, which is familiar to all students of railroad rate making, is to retain the cost principle as a basis of general rate levels but to abandon it, or at least to modify it, in favor of the so-called "value of the service" principle in the fixation of specific rates. The more heterodox choice is to set all rates at marginal cost, relying on a system of subsidies and of excess-profits taxes to equate total revenues with total costs.

The extreme social conservatism of most public utility and railroad specialists has prevented this latter point of view from gaining wide acceptance, or even from receiving any considerable notice, in the literature of rate theory. There is a fair chance, however, that it may become a live issue in the next few years, partly as a result of the recent mathematical defense of the principle by my colleague, Harold Hotelling. Hotelling's defense, published in the July, 1938, issue of *Econometrica* under the title, "The General Welfare in Relation to Problems of Taxation and of Railway and Utility Rates," is, in my opinion, one of the most distinguished contributions to rate-making theory in the entire literature of economics.

Here, as throughout my paper, there is time only for a few brief comments on the controversy under review. First, I note that Professor Hotelling belongs to that amazingly small minority of abstract theorists who are bold enough to draw from their scientifically orthodox technique of static-equilibrium economics the socially radical conclusions which this type of analysis might seem to justify if it has any significance at all. Unlike Hotelling, most of these theorists have an almost magical ability suddenly to transform themselves into institutional economists at the very moment when one would expect them to begin throwing bombs.

My second comment is that, at least so far as concerns the electrical utilities, the striking discrepancies often found to exist between mere marginal or incremental costs and average costs are due primarily not to the operation of the "law of decreasing costs" in the technical sense of that term but rather to the temporary or chronic presence of low load factors and of excess plant capacity. So-called "long-run" discrepancies between marginal costs and average costs doubtless exist within certain ranges of size of a given utility system (although as to this point our data are very inadequate); but they are by no means the most serious discrepancies, nor do they offer the most formidable obstacles to a satisfactory system of cost pricing.

5. *Disputes as to the Validity of the Cost-Price System in any Accepted Sense of That Term.* I have reserved till last those true social revolutionaries who would reject the whole philosophy of the cost-price system, at least with respect to utility rates, in favor of a system of rates that would help to adjust the supplies of utility services in closer conformity to social needs. Like Hotelling and the other marginal-cost rate makers, these heretics would not make rates as a whole cover costs as a whole. But unlike Hotelling, they see no virtue in a system of rates equal to marginal costs or any other money costs.

The only difficulty, however, with this part of my exposition is that of finding a real, flesh-and-blood individual who has tried to develop a systematic theory of utility-rate making of this nature. Indeed, if such an attempt has ever been made, it has not yet come to my attention.

Nevertheless, an increasing distrust (perhaps I should say, a revival of an old distrust) of the underlying philosophy of the cost-price system is revealed by some of the current literature on public utility economics and has even influenced the actual practice of rate making. This distrust is based upon a refusal to assume, as if it were an economic axiom, that the money costs of constructing and operating public utility plants are reliable measures of social costs, or that the demand prices of individual consumers are acceptable measures of social benefit. Both of these, mutually interdependent, assumptions are essential to the modern, sophisticated rationale of cost price as a general standard of welfare economics. If they are rejected, they would seem to withdraw all support for the practice of cost pricing except for that qualified and, perhaps, transitory defense which rests its case on the necessity of making our price system perform functions that ought to be performed by our tax system, but that cannot yet be performed by the latter because of its extreme crudeness.

Readers of the literature of general economics will find a masterful and temperate discussion of this point of view in the writings of John Maurice Clark; and they will find a suggestive but uninhibited espousal of the same viewpoint in Lancelot T. Hogben's little book, *Retreat from Reason*, in which he expresses utter contempt for orthodox economics. Instead of attempting any comments of my own upon the merits of the issue as applied to the field of utilities, let me note its bearing on several current or recent practices in the field of the electrical utilities.

The first illustration is subsidized rural electrification, which has been practiced for some years in Ontario, Canada, and elsewhere. Even the present program of rural electrification in the United States is by no means completely free from subsidy. According to the cost-price principle, such a program is unsound. Yet it has been defended on the ground that the benefits derivable from farm electrification not only to the farm customers

themselves but also to the country at large are much greater than would be indicated by the monetary demand for the service.

A second illustration is the construction of public electric power plants during the recent business depression by the aid not only of federal loans but also of outright grants made for the purpose of providing unemployment relief. Here, the gross money cost of constructing the plant was deemed partly offset by a social gain not reflected by any benefits accruing to the customers of electricity.

A third illustration is the acceptance, in some states, of blanket-rate areas, within which uniform rates prevail regardless of any local cost differentials. To be sure, even those rate specialists who adhere, in general, to the cost-price principle may find a number of practical reasons for supporting blanket-rate areas—reasons based largely on the extreme difficulty, or even the impossibility, of making any rational territorial allocation of overhead costs. Yet much of the popular support for the blanket-rate system is doubtless based on a belief that locational advantages and disadvantages should be averaged out. I need hardly add that this belief enjoys wide currency with people who live in high-cost locations, whereas it is bitterly denounced by people who live in the low-cost regions.

The final illustration is perhaps the most significant of all, although it does not necessarily imply a permanent breach between rate-making practice and cost pricing. I refer to the leadership taken by the Tennessee Valley Authority, the Rural Electrification Administration, and other agencies in experimenting with new uses for electricity and in setting promotional rates designed deliberately to facilitate these experiments. Here we have an important objective of rate making that does not fit into any of the orthodox criteria of reasonable rates. It suggests "a theory" of rates according to which the optimum rates are those rates which will best contribute to the theory of rates!

One Other Theory of Rate Control

Even a brief review of the various theories or principles of rate control might fairly be criticized for ignoring completely one theory that has great practical significance even though it does not receive mention in the standard textbooks. This might be called the "keep the peace" theory, or, more definitely, the "offsetting squack" theory of rate regulation. According to this standard, the proper objective of regulation is to set such rates as will keep peace within the community by an adroit balancing of the forces of the opposing pressure groups. The optimum rate then becomes that rate which will precisely equate the protests of those who demand a lower rate with the protests of those who demand a higher one.

As a principle of sound public policy, this principle has obvious short-

comings; and I am not mentioning it here by way of recommendation. But if one is looking for some single hypothesis which might serve better than any other to reconcile the apparently chaotic and conflicting history of rate regulation as revealed by statute law, commission rulings, and court decisions, one would hardly dare to overlook the "offsetting squack" principle as a promising candidate.

Conclusions

Having thus reviewed a few of the major controversies that have centered in attempts to find some basic standard, or set of standards, for the determination of reasonable public utility rates, I may now state a few of the major conclusions which these conflicting dialectics seem to justify.

1. A system of public utility rates no less than a system of prices in general performs not one great economic function but many.

2. Under certain circumstances, some of these functions can be performed in close harmony with others, in that a rate which is best adapted to perform function A is also best adapted to perform function B. More often than not, however, no such divine harmony exists, with the result that a rate structure best designed for any one function is thereby poorly designed for others. For example, a rate structure best adapted to maintain corporate credit may be badly adapted to secure managerial efficiency. At times, this situation reaches the stage of an almost perfect dilemma, in that the choice of one desired objective of rate making makes necessary the almost complete abandonment of the other. For example, the attempt to set rates simultaneously at marginal cost and at average cost sometimes becomes like an attempt to draw a square circle.

3. Many, perhaps all, of the useful functions sometimes performed by rates can also be performed by other devices of social control. For example, the credit of a financially weak company may possibly be improved by a rate increase; but it may also possibly be improved by a reorganization under the Federal Bankruptcy Act. One of the most difficult problems of rate regulation is, therefore, that of determining what duties can best be imposed on that much overworked jack-of-all-trades—the rate structure.

4. A mere recital of the three points made above has already revealed my reasons for doubting whether any single, general principle of rate making (such as the principle that rates should be set at marginal cost) can be accepted as *the* great cardinal principle of rate control.

5. Nevertheless, contrary to the apparent position of some institutional economists, I am convinced that these so-called "general principles" (such as that of marginal-cost pricing), when developed on the basis of assumptions which, however oversimplified, are clearly expressed, are of great practical value, in that they point to problems which could hardly be re-

vealed so effectively by any other technique. In fact, I suggest that these theories, now that they are no longer accepted at face value, deserve a large measure of credit for the very truly remarkable progress that has been made in the actual practice of electrical-utility rate making during the past few years. Indeed, one of their great accomplishments (though by no means their only one) is that they embody in clear and rebuttable forms theories entertained in vague and un rebuttable forms by practical rate specialists.

CONCENTRATION AND PRODUCT CHARACTERISTICS AS FACTORS IN PRICE-QUANTITY BEHAVIOR

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In this world of composite index numbers, large multiproduct producers, and industry tabulations, it is easy to forget that price and production phenomena relate to individual commodities. Workers in the economic field, like other workers, must struggle with available raw materials. Thus most studies of price and production behavior have been limited of necessity to the conglomerate data at hand.

In connection with the work of the Temporary National Economic Committee, it has been possible to exploit some of the economic raw material accumulated in the Commerce Department in Washington. For years, data on individual industrial products have been collected as part of the Census of Manufactures but they have been used chiefly to arrive at value of product totals. During the past eighteen months, an extended analysis of concentration by products has been prepared and will appear shortly as TNEC Monograph Number 27. This paper presents briefly some of the significant results of this study of manufactured products.

In earlier studies of price-quantity behavior the analysis has usually been in terms of one variable. We are extending the analysis by attempting to ascertain not only the nature of the relationship which may exist between concentration in production and price-quantity behavior but also the relation which may exist between the basic economic characteristics of the products and their price-quantity behavior. And particularly, we are interested in investigating the interrelation which may exist between both types of variables themselves and their relative importance in determining price-quantity behavior.

The analysis here is in terms of census products and the data relate to the quantities and the average realized prices of these products. The thousands of physical commodities produced by our industries and listed separately in the Census of Manufactures as products differ among themselves with respect to physical characteristics, although frequently the differences are very slight. Just when a gap in substitutability exists sufficient to warrant saying that two different physical things are economically different products it is impossible to say. In general, however, one is warranted in assuming that census product differentiations do reflect in varying

degrees significant economic functional differences, since they represent largely the cumulative result of suggestions and requests made through the years by manufacturers and their trade associations.

The study of concentration was made for 1,807 census products selected in such a manner that they present a comprehensive over-all picture of the situation existing in the entire manufacturing segment of the economy. The products analyzed accounted for slightly less than one-half of the total *number* of census products and covered more than one-half of the total *value* of all manufactured products in 1937. The sample covers the products listed in 117 census industries selected from all industry groups except the printing and publishing group.

The degree of concentration in the production of each of these products is measured in terms of the proportion (percentage) of the United States total value of each product accounted for by the output of the leading four producers of that product. This so-called "concentration ratio" was computed on a company basis. To do this it was necessary to pull together for each product the amount which was manufactured in the various establishments under common control in order that the aggregate company output could be obtained.

This measure of concentration represents only the control exercised by companies and subsidiaries in which they have a majority stock ownership. No account is taken of those many other types of relationship which bring companies together into operating unity—cases in which control is actually established or enhanced by agreements, collusions, conspiracies, or "understandings" among the producers. Thus, a product might have low or medium concentration as measured here yet, owing to collusions or agreements among producers, a very high degree of control might actually exist. Such situations are undoubtedly present in the long list of 1,807 products analyzed. This limitation is not particularly serious, however, since there are plenty of cases of high concentration of the direct sort to establish the relations which are being measured.

The prices used in this study are the average realized prices of census products. These average realized prices were derived by dividing the total value of a census product by the quantity of that product reported for a given year. Certain advantages to the use of price data in this form may be cited: (1) comparable price and quantity data are available for each product; (2) it is a net realized price and avoids the fiction which surrounds nominal or quoted prices as used in the typical indexes. It reflects all sorts of rebates, special allowances, quantity discounts, cash discounts, extras, etc.

The limitations on the use of average realized price data may be indicated, although it is believed they do not seriously impair their value for this study: (1) a census product designation may include several dif-

ferent economic commodities in so far as manufacturers are able to differentiate their products through advertising or other devices; (2) since a census product designation may include items of different grade, a shift in purchases from goods of one quality to another over a depression-recovery period are not always reflected in average realized prices; (3) there is the further difficulty of accounting for changes in the quality of a product over time—a limitation common to price analysis generally.

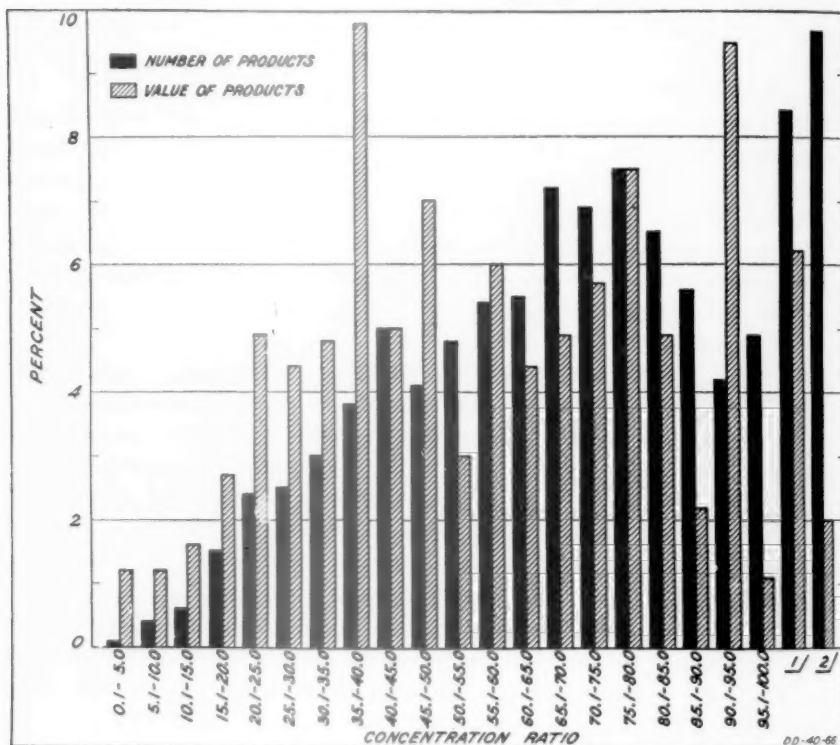


CHART 1.—Distribution of number of products and value of products by concentration ratio classes, all industry groups combined, 1937.

¹ Withheld to avoid disclosures among the leading four companies.

² Withheld to avoid disclosures among the remaining companies.

The investigation of the concentration patterns for products with different economic characteristics is a basic step in the analysis. But first the concentration pattern in all manufacturing should be examined. The over-all picture of the concentration in the production of manufactured products in 1937, as presented in chart 1, reveals that the majority of such goods were made under conditions in which the leading four producers supplied 75 per cent or more of the total value of each product. Approximately,

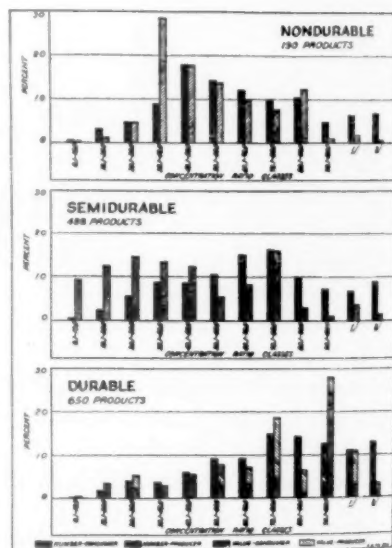
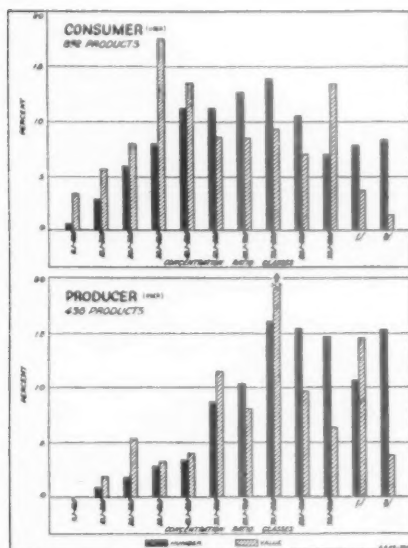
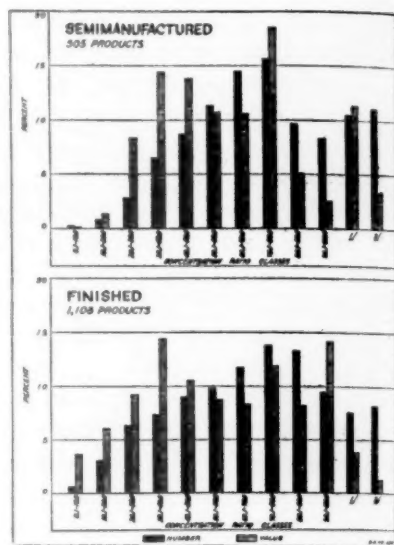
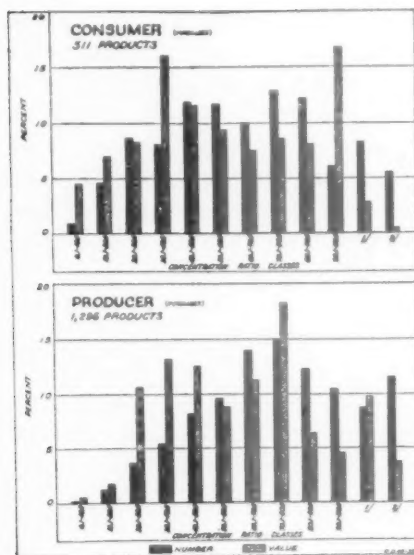
three-fourths of the total number of products had concentration ratios above 50 per cent, and nearly one-third had concentration ratios above 85 per cent.

For only one of the 1,807 products was the value of the output of the leading four producers taken together less than 5 per cent of the United States total. On the other hand, 89 products had concentration ratios falling between 95 and 100 per cent. Furthermore, there were 328 products in the groups designated in chart 1 by the footnote symbols "1" and "2" whose actual concentration ratios would probably place them in the highest classes. These two symbols were assigned to products for which concentration ratios could not be computed without violating the disclosure rules set forth for the TNEC study by the Bureau of the Census. Products allocated to the footnote "1" group were those for which the value of product of one of the companies producing it made up 75 per cent or more of the total, or for which two companies accounted for 90 per cent or more of the aggregate. These are, therefore, all cases of extremely high concentration. This disclosure rule also applied to any figure which could be obtained by subtraction or addition to any published figure. Products in which there would have been disclosures of this second type were assigned to the footnote "2" group. It can also be assumed that these cases had high concentration ratios.

In contrast with the preponderant *number* of products occurring in the upper concentration classes, a much higher percentage of the aggregate *value* of the products was accounted for by items in the middle concentration classes. One-half of the *value* of all the analyzed products was accounted for by products having concentration ratios less than 60 per cent, as contrasted with one-third of the *number* of products in this class. The general tendency, then, is for the more important products *valuewise* to have relatively lower concentration ratios while the less important products *valuewise* had the relatively higher concentration ratios.

For the study of the relations between the concentration ratios and some of the economic attributes of commodities, the 1,807 products analyzed in this study were classified on the basis of (1) type of immediate purchaser, (2) type of ultimate user, (3) degree of durability, (4) degree of fabrication, (5) type of market, (6) source of raw material, (7) construction materials, and (8) producers' supplies. The general systems of classification of Mills and Kuznets of the National Bureau of Economic Research and of the Bureau of Labor Statistics and the National Resources Committee served as guides in classifying the products in this study.

The distributions of number and value of products according to these various economic characteristics are presented in charts 2 through 7. In chart 2, products are distinguished on the basis of whether they were purchased from the manufacturer by a producer or by a consumer; that is, by



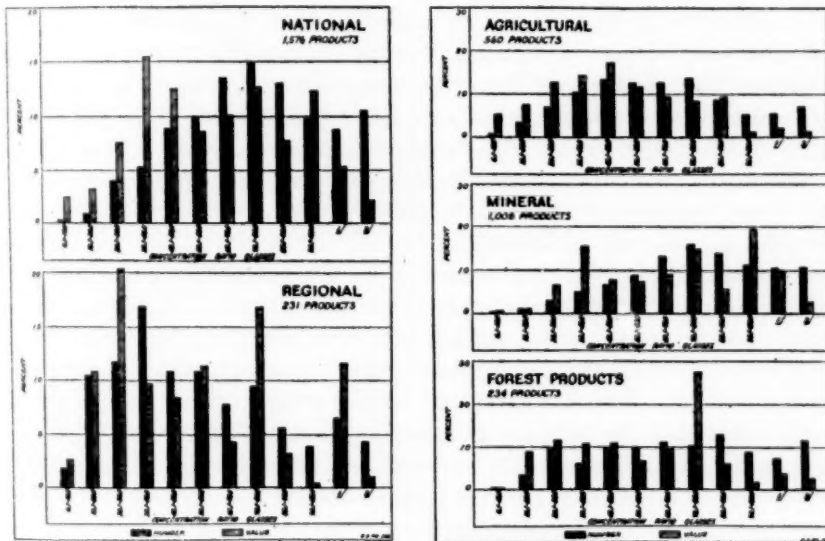
Upper left, CHART 2, Distribution of number and value of products according to type of immediate purchaser by concentration ratio classes, 1937; upper right, CHART 3, same, according to degree of fabrication; lower left, CHART 4, same, according to type of ultimate user; lower right, CHART 5, same, according to degree of durability.

¹ Withheld to avoid disclosures among the leading four companies.

² Withheld to avoid disclosures among the remaining companies.

a business buyer or by an individual or trade buyer. In chart 4, products were classified on the basis of the ultimate user into producers and consumers goods categories. By way of illustration of the differences between the two categories, 90 per cent of the pack of canned apples was put up in number 10 cans (the gallon size) which are primarily purchased by producers such as bakers, restaurants, etc. Canned apples were therefore classified as a producers good in chart 2. The user of this product in its ultimate form, however, is the consumer and the item was classified as such in chart 4. The current interest in the prices of construction materials led to the establishment of a separate category for products of this type while the difficulty of imputing final characteristics to intermediate producers goods resulted in the establishment of producers' supplies as a distinct class.¹

In general, producers goods were characterized by higher concentration ratios than consumers goods, and durable products had higher concentration ratios than non-durable goods. The distributions of products classified as semifinished and as finished were quite similar if measured in terms of the central tendency, although the scatter of products over the range was somewhat different. Products with a national market had higher concentration ratios than products with regional markets but in this connection it must be



Left, CHART 6, Distribution of number and value of products according to type of market by concentration ratio classes, 1937; right, CHART 7, same, according to source of raw materials.

¹ Withheld to avoid disclosures among the leading four companies.

² Withheld to avoid disclosures among the remaining companies.

³ Owing to lack of space no charts for these goods are presented here.

remembered that the concentration ratios were computed in terms of national totals. The effective control over the marketing of products with regional markets may be much greater than the production concentration ratio would indicate, since the market area for these products is restricted to a single region or locality. Products from mineral sources had higher concentration ratios than products manufactured from agricultural materials. The items included under construction materials do not show an unusual degree of concentration, a fact which may be explained in large part by the regional character of the market for many of them.

Products listed as consumers goods, either on the basis of the immediate purchaser or of the ultimate user, were manufactured under conditions of slightly less concentration than were producers goods. This difference reflects largely the fact that producers goods are more likely to be durable than non-durable in character. Reference to chart 5, indicates that both in terms of number and value of products the proportion of durable goods was considerably larger at the upper concentration levels than the proportion of non-durable goods. It is also apparent from this chart that the durable consumers goods follow the pattern of the producers goods rather than that of the non-durable goods which were all consumers products. Contrary to the dominant role played by the factor of durability, the classification by degree of fabrication yields distributions for finished and semi-finished goods similar in pattern to that for all manufactured products taken together. The distinctly different patterns between products whose basic raw material was agricultural on one hand and mineral on the other suggests that multiple causes account for the variation.

Of course, there are many other factors not here explored. Certainly before any complete answer can be given, the investigation should include consideration of such additional factors as the cost characteristics surrounding the manufacture of the products, plant requirements, the degree to which the products are standardized, the importance of brands and other types of differentiation, the degree of competition from substitute products, the ease or difficulty of entrance into the industry, etc. The influence of none of these factors is measured here directly.

In order that the relation between a product's concentration and its price and quantity behavior in recession and recovery might be appraised, each product among the 1,807 for which comparable data were available from the Census of Manufactures for 1929, 1933, and 1937 was segregated for further analysis. Since the analysis was to run in terms of changes in quantity and in terms of changes in average realized price, it was necessary that only those products for which quantity data were available in the census records be included in the list. Furthermore, only those products

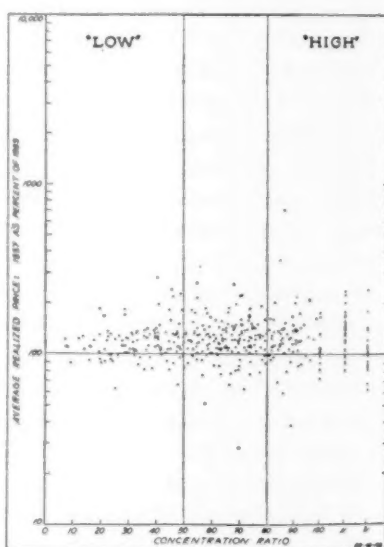
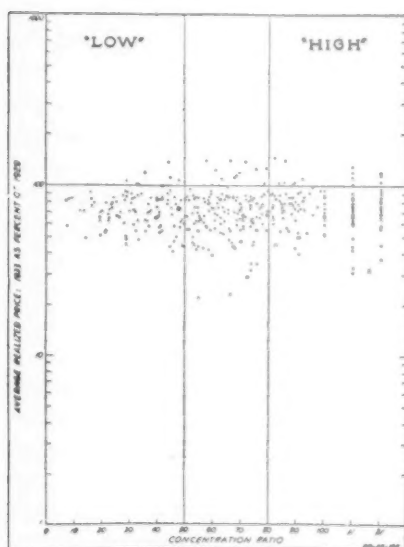
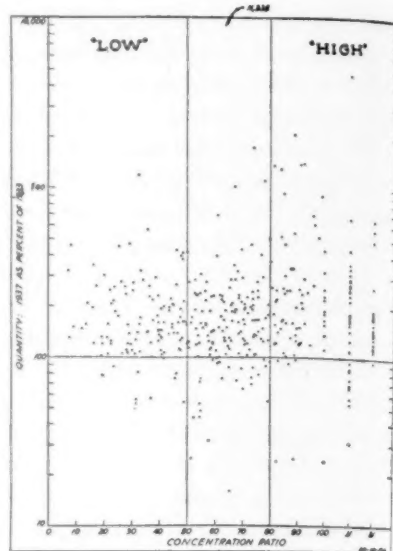
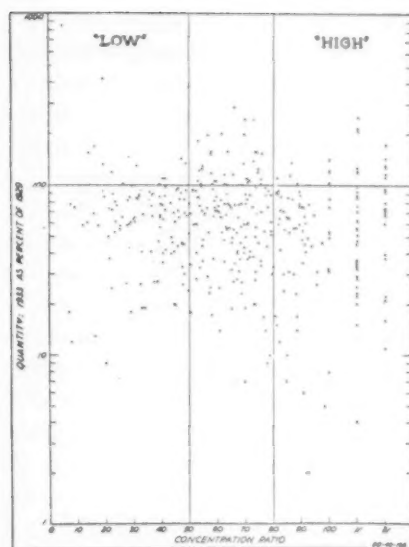
which were identically classified throughout the period could be used. The imposition of these two limitations reduced the sample from 1,807 to 407 products. The distribution of the number and value of these 407 products by concentration ratio classes conforms closely to the distribution of the 1,807 products and since the 1,807 sample covered, in a quite comprehensive manner, all types of manufacturing operations, this smaller sample provides a fairly adequate base for the analysis which follows.

The percentage change between 1929 and 1933 in the quantity output of each of the 407 products is plotted against the concentration ratios of the products in chart 8. The quantity changes in the upswing from 1933 to 1937 are shown in chart 9. For the purpose of sharper analysis, the charts are divided into three parts, each of which contains approximately one-third of the product points. In the ensuing discussion, those products with concentration ratios above 80 per cent are said to be in the "high" concentration group, while those products with concentration ratios less than 50 per cent are referred to as the "low" group.

There is an implicit assumption throughout this stage of the analysis that the concentration ratios of products did not change significantly between 1929, 1933, and 1937. Products which by actual measurement had "high" concentration ratios in 1937 were assumed to have had "high" concentration ratios in 1929 and 1933. This is not to deny the fact that the concentration ratios of a few products may have changed materially, but over the entire list there were probably not enough of these changes to affect the results in any appreciable degree. The results of a study of changes in concentration ratios between the two census years 1935 and 1937 indicate quite definitely that there was no "wholesale" movement toward an increase or decrease in concentration ratios. Furthermore, the changes that did occur were restricted to a narrow range and were random in their distribution.

An inspection of charts 8 and 9 reveals very little observable difference in the behavior of products with "low" concentration ratios as shown in the left-hand part of the charts and the behavior of products with "high" concentration ratios shown in the right-hand portions. Except for a half dozen products which decreased more than 90 per cent in the recession (chart 8) the inference is clear that changes in quantity output of the great mass of manufactured products were not related to the concentration ratios of the products. In other words, the contraction in output between 1929 and 1933 was almost equally common and equally severe for products with "high" and with "low" concentration ratios. The same general observation may be made for quantity changes in the period of expanding activity shown in chart 9.

The relation between the changes in average realized prices of the ana-



Upper left, CHART 8, Relation between concentration ratio and percentage change in quantity produced, 1929-33; upper right, CHART 9, same for 1933-37. Lower left, CHART 10, Relation between concentration ratio and percentage change in average realized price, 1929-33; lower right, CHART 11, same for 1933-37.

¹ Withheld to avoid disclosures among the leading four companies.

² Withheld to avoid disclosures among the remaining companies.

lyzed products from 1929 to 1933 and their concentration ratios is shown in chart 10. Similar data for the recovery period are shown in chart 11. As was true in the case of quantity behavior, the highness or lowness of the concentration ratios of the products does not appear to have any measurable relation to the decreases or increases in average realized price. Products with "low" concentration ratios experienced approximately the same price changes as products with "high" concentration ratios. A general feature of these charts showing price changes as contrasted with the charts showing quantity changes is the much narrower spread of the product points in the scatter diagrams showing changes in price than in those showing changes in quantity.

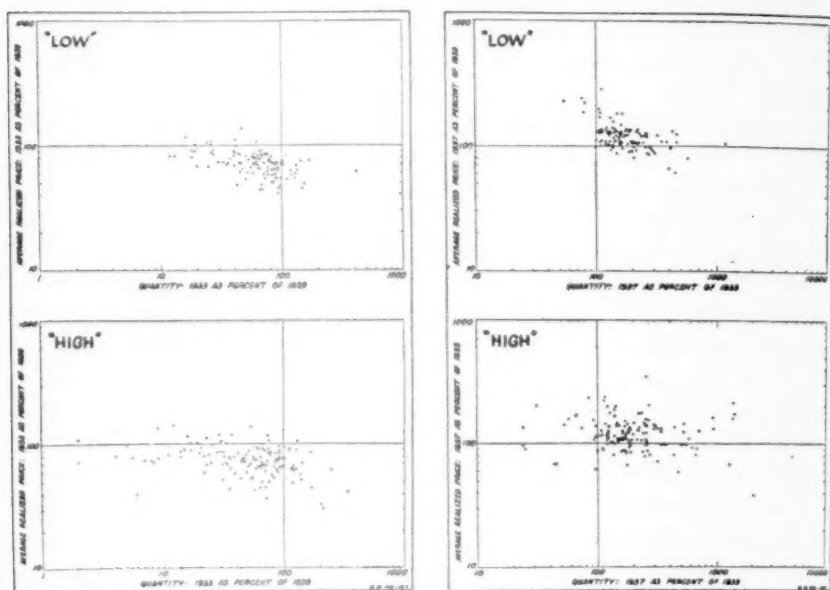
As charts 8 through 11 are studied, a natural question arises as to the nature of the products which experienced the wide decreases in quantity and price in the downswing and broad increases in the upswing. There were 72 products, or 18 per cent of the 407 sample, which experienced decreases in quantity between 1929 and 1933 of 70 per cent or more. The aggregate value of this 18 per cent of the *number* was only 2.3 per cent of the total *value* of the products in the sample in 1933. In other words they were not particularly important valuewise in the economy. Sixty-seven of the 72 items were products whose immediate purchasers were producers, approximately 95 per cent of the products were classified as durable in nature, and 70 of the 72 items were manufactured from materials of mineral origin. And, it should be mentioned, the percentage distribution of these 72 products by concentration ratio classes closely approximates the distribution one would expect if the products were chosen at random from the total sample of 1,807 products.

An inspection of the products which showed large increases in quantity output during the upswing reveals that many of the products were the same as those which experienced the wide decreases indicated above. Of the 56 products showing quantity increases of 200 per cent or more between 1933 and 1937, there were 42 which appeared in the list of products with decreases of 70 per cent or more in the downswing. In general, then, these products with broad quantity increases were producers durable goods.

Turning to an analysis of the natures of the products experiencing wide price changes, we find that of the 407 products in the sample there were 47, or 11.5 per cent of the products, which dropped 50 per cent or more in price between 1929 and 1933 and these products accounted for 19 per cent of the total value of the 407 products. They were thus of more than average importance valuewise. In brief, these products were largely non-durable consumers goods which were processed predominantly from agricultural materials. To a large extent the products which showed wide price

increases on the upswing were the same products which declined most in the recession but the comparability was not nearly so close as in the case of quantity changes. In general, the products were consumer goods.

It should be clear at this point that the changes in average realized price and the changes in quantity experienced by the products are not to be accounted for by the degree of concentration. Rather, the analysis of the nature of the products experiencing wide changes suggests the conclusion



Left, CHART 12, Relation between percentage change in quantity produced and percentage change in average realized price, 1929-33; right, CHART 13, same for 1933-37.

that the variations which occurred are to be explained in terms of the economic characteristics of the products themselves. This lead will be explored in more detail, but at this point we shall complete the examination of the relation between changes in price and in quantity for the products with "high" and with "low" concentration ratios.

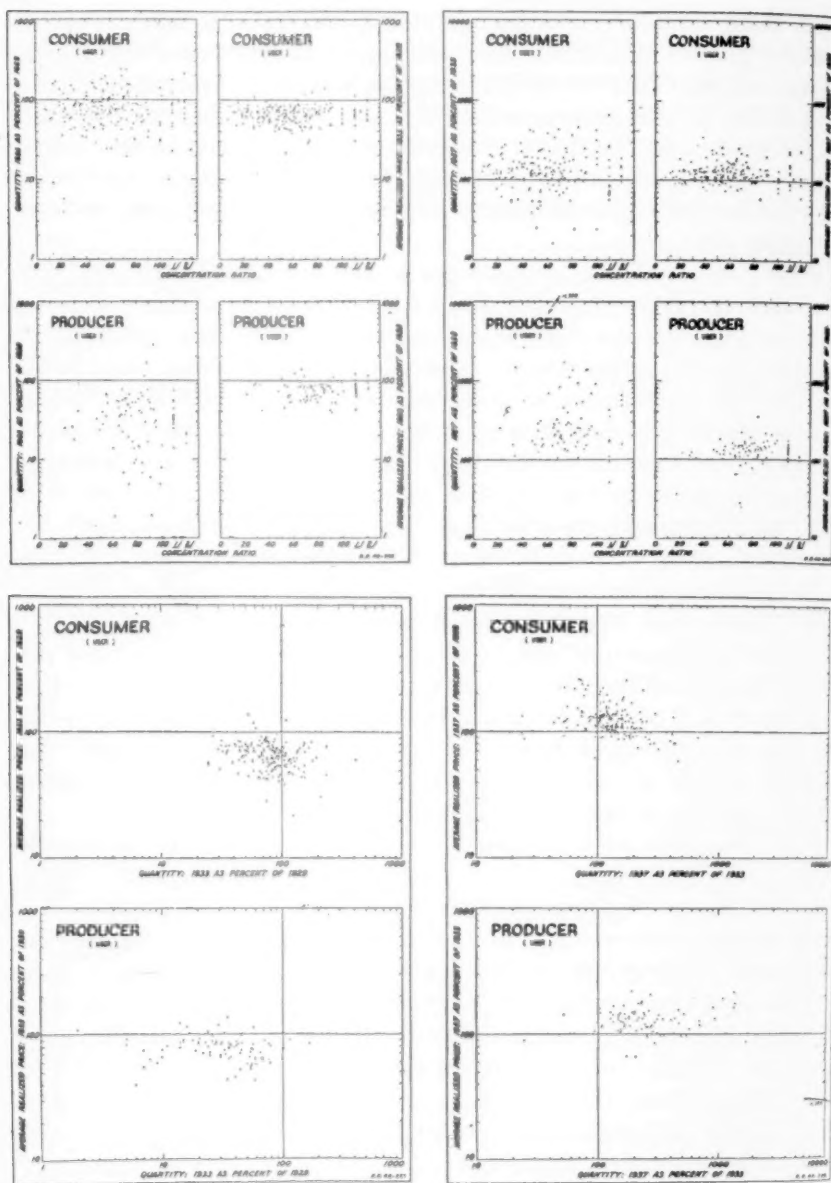
In chart 12 the percentage changes between 1929 and 1933 in the average realized prices of products with "high" and with "low" concentration ratios are plotted against their percentage changes in quantity during this same period. The relation between these two variables for the 1933-37 period is shown in chart 13. In both, the pattern of inverse relationship is strongly marked but the scatter of the product points in the high group is

much more extended. It is evident that generalizations about the price-quantity patterns of commodities with high concentration are much less certain and exact than for the low concentration cases. The basic rule, however, is true of both groups; namely, that the degrees of price and quantity change tend to be inverse in nature. Those few products in the "high" group which experienced the very large contractions in quantity output in the recession are the same durable producers' items which were noted in the earlier charts.

It has been argued that concentration in the production of products manifests itself in price and output policies which result in distinctly different behavior patterns from those found in the absence of such concentration. According to this hypothesis, the prices of products produced under conditions of high concentration are maintained in a period of business recession and the depression adjustment takes the form of a contraction in output. In a period of recovery, on the other hand, the immediate effects may be increases in output at the old price as demand expands. Although there might be a tightening of credit terms, lowering of cash and quantity discounts, etc., actual price increases would probably not occur until near capacity operations were reached. Similarly, it has been contended, and in some cases demonstrated, that the prices of some products were not reduced in the 1929-33 downswing and in the ensuing upswing were pushed still higher. Under this same hypothesis it has been contended that the adjustments to cyclical changes for products with low concentration tend to take the form of relatively wide price reductions in the downswing and wide advances in price in the upswing, while the fluctuations in production are relatively narrow in both movements.

In an evaluation of the above hypothesis it is essential to observe the predominant location and conformation of the product points in the upper and lower diagrams of charts 12 and 13. If the hypothesis were tenable, one would expect the cluster for the "high" and "low" concentration groups to fall in distinctly different areas on the charts. Actually, however, the product points for both groups tend to string out through the same general areas in both the upper and lower sections of the charts. The heaviest clusters in both cases are in almost identical areas on the diagrams. This means that products with both "high" and "low" concentration ratios per se did not have substantially different price-quantity behavior patterns during the 1929-33 period. From this empirical evidence, it may be said that the degree of concentration in production is not a paramount consideration in explaining the price-quantity behavior of individual commodities.

The wide scatter of points in the lower diagram of chart 12, reflecting the divergent behavior of products in the "high" concentration group, points



Upper left, CHART 14, Relation between concentration ratio and percentage change in quantity produced and average realized price for products grouped by type of ultimate user, 1929-33; upper right, CHART 15, same for 1933-37. Lower left, CHART 16, Relation between percentage change in quantity produced and percentage change in average realized price for products grouped by type of ultimate user, 1929-33; lower right, CHART 17, same for 1933-37.

- ¹ Withheld to avoid disclosures among the leading four companies.
- ² Withheld to avoid disclosures among the remaining companies.

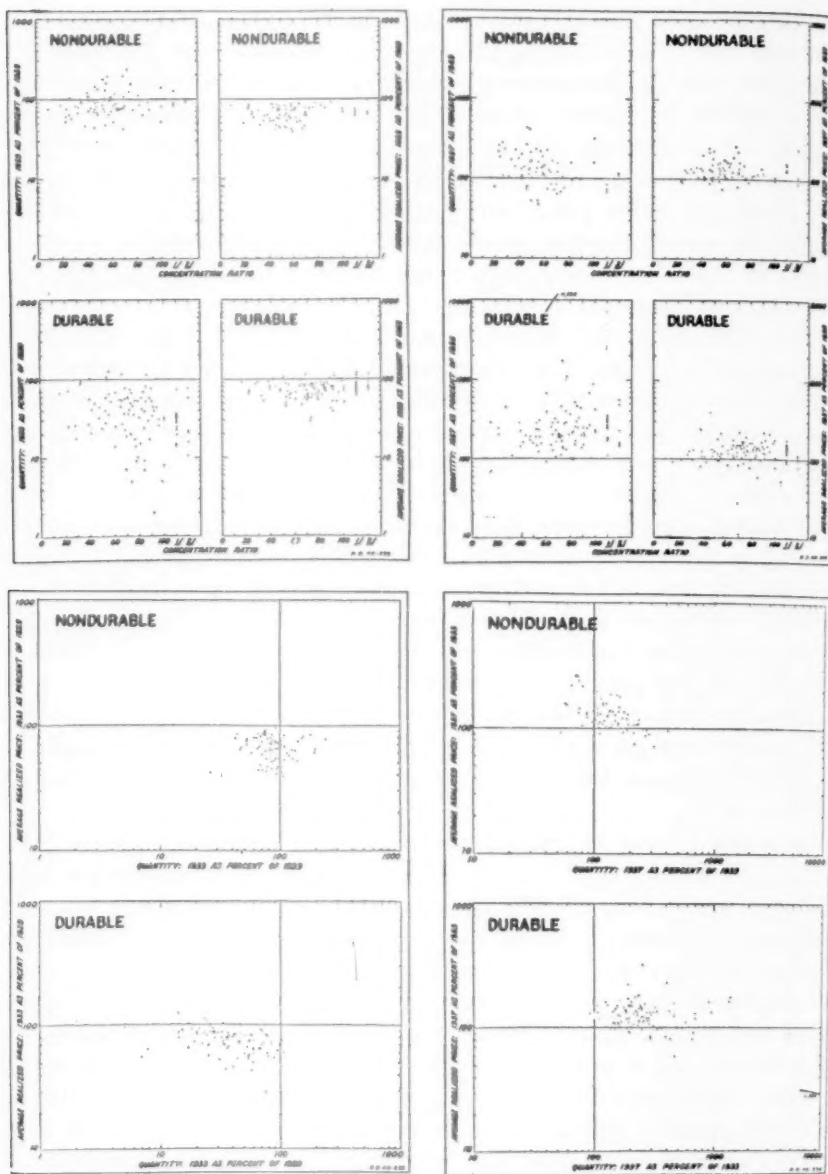
to the conclusion that in actual practice the control over the supply of the products analyzed did not lead to any uniform and unique pattern. Obviously, the price and production policies for some products did result in rigid prices, but the contention that such price and production policies were more widely characteristic of products manufactured under conditions of high concentration is definitely not tenable. The determination by a concern of a price and production policy which manifests itself in rigid prices accompanied by curtailed output would appear from this material to be conditioned by some circumstances other than the potential or actual control over the supply of the product.

The similarity of the scatter of product points in the "high" and "low" sections of chart 13 bears out the above contention. There is an added interest in this chart, however, since the diagrams present the picture of the relation of changes in price and quantity in a period of rising business activity. Earlier analyses have centered largely in an examination of product behavior in a period of declining business activity. Again it becomes clear that price and quantity changes—this time increases—tend to be inverse in nature. And again it is true that the cases of high concentration scatter much more widely than those of low concentration. Nevertheless, the central clustering of both is about the same, there being no more evidence that the products at one end of the concentration scale take the improvement in the form of price rises to any greater degree than do products at the other.

It was pointed out earlier that there was a certain uniformity in economic characteristics of products which experienced extremely wide changes in quantity output and price over the period of the cycle. That lead may now be taken up.

In charts 14 and 15 the percentage changes in quantity and in price from 1929 to 1933 and for the 1933-37 period are shown for products classified on the basis of their ultimate users into consumer and producer categories. Products ultimately used by consumers experienced somewhat narrower contractions in quantity between 1929 and 1933 than products whose ultimate users were producers, as shown by the general levels around which the points cluster. Only two products in the producer section of the chart showed increases in quantity while 45 products in the consumer category experienced increases in quantity. In the upswing from 1933 to 1937, the quantity output of the producers' items expanded, on the average, considerably more than that of consumers' products. There was no appreciable difference in the price behavior of consumers goods and producers goods in either the 1929-33 period or in the 1933-37 period.

The scale from left to right in these diagrams covers the range for the concentration ratios. It is most significant that there appears to be no rising



Upper left, CHART 18, Relation between concentration ratio and percentage change in quantity produced and average realized price for products grouped by degree of durability, 1929-33; upper right, CHART 19, same for 1933-37. Lower left, CHART 20, Relation between percentage change in quantity produced and percentage change in average realized price for products grouped by degree of durability, 1929-33; lower right, CHART 21, same for 1933-37.

¹ Withheld to avoid disclosures among the leading four companies.

² Withheld to avoid disclosures among the remaining companies.

or falling regression line for either of the price charts or the quantity chart for consumers goods and only a negligible inverse relationship in the quantity chart for producers goods. In other words, consumers goods behave differently from producers goods, but taking each group separately, the behavior of products within the group is influenced little or not at all by the extent of concentration.

Since price changes tend to be quite similar for both consumers and producers goods, the difference in the quantity-change patterns for these two types of goods must be accounted for in terms of the variation in the nature of economic characteristics of the goods themselves as reflected in the demand schedules for the products and not in terms of price policies. These differences are shown more clearly in charts 16 and 17. For those products ultimately used by consumers (upper half chart 16), there is a tendency, as reflected in the conformation of the product points, for small price decreases to be associated with relatively large contractions in output and for sizable price decreases to be associated with relatively small contractions in quantity. In contrast with this tendency, decreases in price of producers' items (lower half chart 16) do not appear to be associated with any strongly marked quantity behavior. Small and large decreases in price tend to appear indiscriminately with large or small contractions in quantity produced.

This same condition is apparent in chart 17, but here, of course, there is a reflection of the price and production characteristics of products in a period of increasing business. In consumers goods price is an important factor in determining volume but in the case of producers goods there is no such definite relationship.

Charts 18, 19, 20, and 21 present similar material for products classified on the basis of the degree of their durability into non-durable and durable goods. The non-durable products experienced much less severe contractions in quantity output between 1929 and 1933 than were experienced by the durable items. An inspection of the list of products in these two categories reveals the divergent natures of the items in these two groups. The non-durable products are largely items for which the demand is steady and continuous within rather narrow limits; i.e., products whose expansion or contraction tendencies are associated more with the number of consumers than with other variables. The durable items, on the contrary, are products for which the demand may be deferred or for which the demand is postponable. Furthermore, since the replacement demand of durable consumers goods is easily postponed in periods of declining income, the income diverted through this postponement may be used to bolster the purchase of non-durable goods. Thus, it may be possible, with a product having a normal

service life of five years, to "get along" with the item beyond the period when it would normally be discarded, while non-durable items, since they are consumed in a single use, must be regularly purchased if consumption is to continue. By consulting the chart it may be seen that the durable products experienced severe decreases in output in the downswing from 1929 to 1933 but, conversely, they showed large increases in quantity output in the 1933-37 period when business generally was expanding.

The behavior of prices of non-durable and of durable goods was quite similar in the downswing, 1929-33, and again in the upswing, 1933-37. Since the price changes cover about the same range and, further, are of approximately the same average height on the diagrams, any observable variations in the quantity behavior of the durable and non-durable items must be ascribed largely to the differences in durability or to other factors which are themselves exclusively associated with durability or non-durability. That is, since price behavior may be viewed as a constant factor in both groups, the much wider contraction in the quantity output of the durable than the non-durable products must be associated with these characteristics of the products.

The quantity changes of durable goods in both the downswing (chart 18) and the upswing (chart 19) appear to be positively related, within very broad limits of scatter, to the concentration ratios of the products. Stated more generally, there is a rather broad tendency for durable products with high concentration ratios to experience large contractions in output in the downswing and to show wide expansion in production in the upswing. This general tendency is not evident among the products in the non-durable category. As far as price changes are concerned, the patterns for neither group seem to be influenced to any appreciable degree by the extent of concentration.

The relation between the changes in quantity and the changes in price of durable and non-durable products is shown in charts 20 and 21. The pattern of product points in the non-durable sections of the charts is markedly different from that in the durable sections. Since price changes for products in both categories are quite similar, the relatively narrow changes in output experienced by non-durable goods gives the cluster effect to the points in the upper sections of the charts. Furthermore, the conformation of product points in the non-durable sections suggests the presence of an inverse relation between changes in price and changes in quantity for products in that category. In contrast, the product points in the durable sections cover a much wider range and are so scattered that the relation between price and quantity changes is much less strongly marked. Similar charts showing the effect of other economic characteristics of products in their price-quantity

behavior were prepared in connection with the complete report. Only the technique of handling the problem as demonstrated above and a brief statement of results can be given here. In the case of those products purchased by business buyers as contrasted with those purchased by trade or individual buyers—producer as contrasted with consumer purchasers—the declines in quantity output were much more severe in the downswing and much more extensive in the upswing for those products purchased by business buyers. There was no appreciable difference in the behavior of the prices of either the producer or consumer items.

The quantity-price behavior of semimanufactured and finished goods was very similar. The similarity in the behavior patterns of products in these categories may be accounted for in large measure by the fact that all other product characteristics are present in both semimanufactured and finished goods. Products which are durable have their semifinished and finished stages; products ultimately to be used by consumers or by producers also have their semifinished and finished stages; and similarly for other product attributes.

There were rather sharp differences in the quantity-price behavior of products manufactured from materials derived from mineral as contrasted with agricultural sources. The quantity fluctuations which products with mineral origins experienced were much wider than those for products with agricultural origins, while the price fluctuations of items in the agricultural group were somewhat wider. This behavior, as with behavior in most of these cases, is the result of a combination of factors. In general, agricultural raw materials eventuate in non-durable manufactured items while the products of mines are processed into durable items. Then, too, the structure of production in mining is quite different from that in agriculture and any differences in the price-quantity behavior of the raw materials would probably be passed on in considerable measure to the manufactured products in which they eventuate. In all these cases, where commodities of a given characteristic were brought together there was no evidence of a tendency for the price-quantity patterns to differ within the group according to the degree of concentration.

To summarize this epitome of a larger TNEC report: Most important is the demonstration, with better evidence than has ever before been available, that the degree of concentration in production is not a significant factor in determining price-quantity behavior of manufactured products with reference to the business cycle. This proposition does not shed any light on whether or not the levels of individual prices from which cyclical changes were made were higher relative to cost in the cases of higher concentration. It does imply that so-called "price rigidity" is not in any considerable degree

a function of the extent of concentration. Rather, the price-quantity patterns as well as the degree of concentration appear to be directly related to the economic characteristics of the commodities involved. It is from this relationship that economic consequences derive both in terms of market behavior and in terms of business organization.

ROUND TABLE ON ECONOMIC RESEARCH

PAUL T. HOMAN, *Chairman*

The round table continued for two sessions. At the first session papers were presented on "The Role of the Universities," by Carl F. Remer; "The Role of Research Institutions," by Harold G. Moulton (read by Frank W. Fetter); "The Role of Conferences and Other Co-operative Groups," by Edward S. Mason; "The Role of Private Business," by John H. Cover (presented in abbreviated form by Horace G. White, Jr.); and "The Role of Government," by Morris A. Copeland. At the second session papers were presented on "The Role of the Social Science Research Council," by Edwin G. Nourse, and "The Role of the Foundations," by Joseph H. Willits.¹ Mr. J. Frederic Dewhurst presented a summary statement on "Organization Problems in Economic Research," based on advance study of the papers. There was discussion from the floor by Frank W. Fetter, Isador Lubin, Wesley C. Mitchell, Alexander Loveday, Lowell J. Chawner, and Boris B. Shishkin. Since it is hoped that separate publication of these papers will be arranged, very brief notices are given herewith.

CARL F. REMER: The university in the United States is called upon today to perform a double task. It must, in the first place, serve the nation. And it must face the deadly danger in the world's international relations.

No social science can be completely objective. How, in short, are we to get from analysis to the formulation of policy? Conscious attention to policies and goals would enrich the literature of economics. Research includes all sustained and systematic study of a subject by those who have some reasonable claim to competence in the field. Research may consist of the manipulation of abstractions, the skilled observation of present or past phenomena, or the construction by the mind of the means of valuation and control. It must include the formulation of possible policies, the examination of alternatives, the search for wisdom.

"Funds available for the research work of the university social scientists are," to quote a report, "generally speaking paltry." Funds are important but no more so than the organization of assistance for the research worker—a continuously operating office and bureau. The university has certain special advantages in that men from the different social sciences may co-operate. When specialists in a number of fields are required, the research institution is likely to be at a disadvantage. The first and most frequent criticism of the university professor as a research worker is his excessive individualism. In economics the significant work in theory has usually been done by men who have worked by themselves. Research of different types must, of course, be recognized. There must be the painstaking accumulation of information and material, and the careful application of statistical methods. The graduate students in our universities are the research workers of the future, not only in our universities but in the research institutes, in business organizations, and in the government service. If there were time I would plead at some length for the removal of every aspect of artificiality, of remoteness from the work of others, and of mere convention from the dissertation requirement and from the training of the graduate student.

¹ Unfortunately Mr. Willits' paper was not available at the time for making this report.

The social scientist must attack the intellectual problems involved in the social solidarity of a great democratic state. For example, the international trade and the international economic relations of the country have never been examined from the point of view of preparation for war and of war strategy. The university cannot leave the intellectual problems of national defense entirely to the government. How far international studies call for specialized institutes or for a great research institute I do not pretend to say. In any case it is certain that the university is a proper home for international studies.

In conclusion, the university must be, at one and the same time, the servant of the nation and the home of free thought in a democratic community. Research is at once the study of ways and means and the pursuit of social wisdom.

HAROLD G. MOULTON: The chief questions arising in the relations between independent research institutions pertain to the possibility and the desirability of co-ordination and co-operation. There is no positive co-operation or co-ordination among them. That is to say, we neither engage in joint undertakings nor, by agreement, select special fields for concentration. Two things stand out clearly. First, they are not essentially competitive. They differ both in purpose and in method of procedure. Second, these institutions could not well collaborate on joint undertakings. The differences in organization and procedures preclude such a development.

When we survey the activities of research institutions in relation to universities, we find at once more duplication and more co-operation. Duplication of work between research institutions and university scholars occurs frequently and perhaps continuously. Were unlimited funds available, I suspect that in these days most universities would be disposed to establish research units equipped to undertake any type of investigation. Under present conditions, foundations and other financial supporters must of course choose between the establishment of new research units and the more adequate support of existing agencies. The research institutions and the universities co-operate and collaborate extensively. First, university scholars join the staff of a research institution for a period of time. Second, the research institution may decentralize and carry out a comprehensive research project by "farming out" portions of it to university groups.

The Social Science Research Council was established with two primary objectives. The first was to broaden the horizon of scholars. The second was to assist foundations in the problem of making wise financial commitments in this important but difficult field. It does not seem to me wise for the Council to become an operating agency. Some of the permanent committees have become to some extent actual operating agencies. The organization of a *research agency* should be essentially different from the organization of a *council*. The Council should not undertake to pass upon research projects prepared by research institutions or university groups. The Council should not undertake to formulate research projects and then suggest to foundations the institutions where such projects should be carried out.

Most research agencies, however, have found it necessary to obtain from foundations not only funds with which to carry out special projects but also the funds with which to meet a substantial portion of their regular budget. It is this

situation which makes a discussion of the relations with foundations an important problem. If the independently organized research agency merits a place in the scheme of things, then certain requirements may be definitely stated. The most important need is for an endowment large enough to maintain the nucleus of an effective permanent organization. The only practical alternative is a grant of funds for a sufficient number of years to make the enterprise a challenging opportunity.

I would summarize the chief difficulties which the research institutions encounter in their relations with foundations as follows: First, there has been a tendency in recent years for foundations to look with favor upon annual or short-term grants. Second, frequent shifts in foundation policy. Third, the development of the Social Science Research Council and its committees as a sort of intermediary between research institutions and some of the foundations. Unless research institutions can present research projects directly to the foundations and obtain prompt consideration, both the research institutions and research projects of a timely character are certain to be seriously handicapped.

Research institutions have to stand or fall on their own performance. They cannot surrender to third parties their judgment as to the merits of proposed projects or the methods of organization and research that should be followed.

EDWARD S. MASON: This paper (which is not at hand for summarization) described in some detail the organization and procedure of the conference groups set up at the National Bureau of Economic Research, and in particular the Conference on Prices and the Conference on Income and Wealth. Mr. Mason found that when set up on a basis of fixed membership they tended to accumulate "dead wood," but the very active participation of a steady group has led to valuable results of a sort not attainable in other organized methods of research. Given certain necessary conditions, such as a full-time research assistant and an active interest of members, they close a gap in the structure of research organization. Experiences of the few existing groups point to the useful extension of the method.

JOHN H. COVER: An inventory of the economic research activities of an individual concern would surprise not alone management but the research technician as well. The subjects covered in most current research by business may be classified as follows: (1) production and producing methods; (2) personnel and industrial relations; (3) purchasing and inventory; (4) financing, investment, and credit; (5) the market, the consumer, and marketing procedure; (6) economic conditions and tendencies; (7) public and government relations. The most pervasive field of research is marketing, with general economic analysis the next most dominant. Within the category of policy research, pricing is the topic of most frequent interest. The first research in the field of economics undertaken by business was started less than thirty years ago. Forecasting is a responsibility frequently deplored but accepted as a necessity by economic research units. Business planning includes problems of investment and of the capital market. Consequently, we find continuous analysis of the security and capital market. A number of significant studies of the costs of the manufacture of joint products

are under way. Marketing analyses range in variety from economic price studies, through regional sales potentials, to consumer preferences.

The type of research person selected and the significance of his position in the company organization vary greatly. There are some companies whose acceptance of research in company operations is so complete that it permeates all of the company's activities. The most interesting and the most important aspect of the organization of research personnel is the amount and kind of responsibility which may be invested in the staff. The usual position of a research staff in the organization of a firm is in association with a specific department. Many of the large companies also have one or more persons who compose a general economic or statistical research unit attached to top management.

The most prevalent type of co-operative activity involves the publication of industry statistics by trade associations in the various fields. Individual businesses also co-operate with certain governmental agencies. A large number of business organizations have informal research arrangements with college and university schools of business. Co-operative research arrangements are very often established between two or more business concerns. Purchased or commissioned research covers a variety of forms and research services are sold by a number of different types of organizations.

MORRIS A. COPELAND: The difficulty in defining economic research in government derives from the fact that while economic questions are frequently posed and while facts are frequently sought to answer such questions, a variety of procedures is used in organizing and interpreting these facts to give answers to these economic questions. It is a matter of judgment to determine whether a given activity is economic research; i.e., whether the procedures are sound research procedures.

The main functions which economic research in government performs are: Economic research may serve as an aid in the formulation of public policy; as a means for effectuating or enforcing a public policy; as an end in itself, or at any rate the answers which it seeks to provide may be desired for their own sake; as a pawn in the game of politics or bureaucracy; as a form of made work.

Decisions of public policy are made by legislators or other officials of government on the basis of those answers to economic questions which they have come to accept. "Free-for-all" competition between economic research and other processes of organizing and interpreting facts to answer economic questions may be said to prevail. This competition among methods of answering economic questions has latterly been subjected to some restraints. Substantial progress has been made toward the establishment of fair minimum standards of professional economic workmanship. Economic research may provide a quantitative base to which a procedure established in law is to apply, as in the case of price parity legislation for agriculture. The provision of facts through economic research may help directly to promote the policy of a better functioning of our economy. Economic research may serve as a subsidy in kind. New economic research may be undertaken because of the desire on the part of a bureaucrat to expand his functions, without any particular concern on his part as to what functions he expands. A converse case is the cutting off of a research unit not because the research has

been judged by competent economists to be worthless or poorly done but because the research unit is a vulnerable part of an organization under political attack.

Accomplishments are of a substantial and increasing importance. In the fields of agriculture and banking, government research is pre-eminent. It is outstandingly important too in business conditions analysis and forecasting. There is, indeed, no field of economics, except economic theory, in which the contributions of government research are not a substantial part of the whole. Economic research in the federal government enjoys several important advantages in access to materials and contacts with other research workers. Also, the fields of economic inquiry are less marked off into detailed specialties than in academic life, and clerical assistance and mechanical aids to research are more plentiful. Among the drawbacks may be noted the pressure for prompt results, "officialism," canons of governmental propriety, and existing procedures for training and recruitment.

There are today no clearly established professional standards of competence for economic research workers. There is, then, urgent need for some generally accepted and nationally administered initiation procedure for the economic profession; and such a need is particularly urgent as it affects economic research in government. My proposal is that a certification of professional competence be established for economists, but on a voluntary, not a mandatory, basis. If something like Gresham's Law is not to operate in the field of economic research, we should find ways and means to overcome the difficulties involved and introduce the equivalent of coinage for research workers who conform to suitable minimum standards.

EDWIN G. NOURSE: The Social Science Research Council was not conceived as an operating research agency but as a means of stimulating, facilitating, and organizing the work of individual investigators and research groups or agencies. The S.S.R.C. is an interdisciplinary undertaking. In the early days of the Council's work, there was a tendency to take up ambitious—not to say grandiose—research topics. The present practice follows more modest lines by starting with an individual scholar or group of scholars, aiding them in organizing a mutual-aid group for exploring the problem further. Pretentious schemes of simultaneous and continuous collaboration between a large number of social science groups are almost certain to be unwieldy and disappointing. A useful task has been to take specialists out of the narrow atmosphere of a technique to see the related problem in the perspective of other approaches.

The Council puts its emphasis solidly upon quality—upon ascertaining what ways of working in the social sciences produce valid and tenable results. This phase of the Council's work is represented by two general types of activity, one of which is called "appraisal" and the other "planning." An Appraisal Committee has, during the last two years, been undertaking to ascertain what is rated as good work and why. The Council has always been concerned about research planning—the whole structure of the edifice, to ascertain the state of knowledge, and to identify the deficient or retarded areas. The facilities of the Council are available as a means whereby economists from all sections and institutions may be aided in getting together with specialized students of any particular economic

problem broadly conceived in its societary setting. The "prepared conference" procedure with which the Council has also been experimenting aids effective marshalling of the resources of individuals and of institutions.

Opposite appraisal and planning, we may set organization and personnel. The organizational devices of economic and other social research have been too hastily improvised or their character too largely determined by historic accident. Institutional groups as well as individuals have the defects of their qualities. The university has the defect of remoteness from the rough realities of life and of becoming a self-sustaining unit. Business research groups are prone to be limited to narrow concepts of profit maximization. Government agencies are exposed to double dangers. If an independent research institute could ever become endowed on the plane of living to which it would like to become accustomed, it would probably fall into a rut. Constrained to depend on *ad hoc* financing of successive projects, it sails between Scylla of realism, vitality, and the searching, forward look and the Charybdis of excessive caution and intellectual subservience. Its role is naturally complementary to government research, to business research, and to university research.

The Social Science Research Council seeks to satisfy itself and to convince others that it has a distinctive and useful role, especially in general "triangulation" of fields of research. Personnel recruitment programs represent a substantial part of the funds disbursed and are unquestionably successful. We are improvident if we fail to construct the kind of research organization which fits young personnel into the comprehensive schemes of research demanded by the nature of current economic problems.

J. FREDERIC DEWHURST: Economic research has become not only a profession but a big business. But it is far from easy to describe the pattern of organization in terms of responsibility and function. The papers presented today show that there is extreme diversity in their form and structure, administrative responsibility, and method of operation, and in the functions they perform. There is no well-defined functional distinction or clear-cut division of labor. Some problems and some aspects of economic research, however, are of common concern: (1) the purpose and nature of research, (2) administrative and financial problems, (3) personnel training and improvement, and (4) planning and co-ordination of research. Different purposes are compatible between "pure" research, problem or survey research, and applied research, typical of business agencies and much government work.

The increasing shift from individual to institutional research raises the important question of the role of the administrator. The highest achievements will be those of gifted individuals. But a growing proportion of economic research is of a more mundane kind. Personnel selection and control and planning a co-operative program in terms of time and money and allocating work among staff members are most difficult administrative tasks. Still more delicate is the supervision of research in progress and the co-ordination of the work of staff members without destroying individual initiative. Most university research is still on a handicraft basis carried on as a minor sideline to teaching. Co-operative research on a wider scale within the universities must await more adequate financial sup-

port and the development of suitable administrative machinery. Existing independent institutes suffer from the disadvantage of being limited to a single discipline. Is there not a real need for other and more flexibly organized centers for the development of special areas of economic research? The possibility of university domicile for these centers merits serious consideration and experimentation.

In the matter of research personnel, Mr. Copeland's suggestion of establishing a national system for certifying a high degree of proficiency in economic research deserves careful attention. The increasing detachment of organized research from the universities has unhappy consequences both for teaching and research. Whatever the means employed, a closer relation between organized research agencies and the centers of graduate training should be effected.

In suggesting the need for better planning and co-ordination of economic research, it should be recognized that any attempt to regiment organized research programs or to regulate or restrict competition among existing agencies would be unwelcome and ineffectual. But if competition is to be effective it must be informed and enlightened competition. Initially, planning should be modest in scope. The price and income conferences, for example, have been effective planning and co-ordinating devices. More systematic exchange of information on the nature of the work in progress is possible. Some means must be found to record in brief and usable form a record of progress. Perhaps experiments with annual reviews of the cumulated knowledge in limited research areas might be worth the effort. The Council's experiments with so-called "nuclear committees" and with "planning reviews" in restricted fields appear to suggest a technique with real possibilities. The steady accumulation of a systematized body of economic knowledge requires endless struggling with the factual data of research, and the constant reference to theoretical interpretation.

ROUND TABLE ON PROBLEMS IN THE TEACHING OF ECONOMICS

RALPH H. BLODGETT, *Chairman*

Three papers were presented at this round table: "The Objectives of the First Course in the Principles of Economics," by Clifford L. James, of Ohio State University; "Consumer Economics as the First Course in Economics," by Leland J. Gordon, of Denison University; and "Planning Integrated Courses of Study for the Major in Economics," by Kenneth M. Spang, of Yale University. Discussions of these papers were presented by George J. Stigler, of the University of Minnesota, and Harlan L. McCracken of Louisiana State University. The meeting concluded with some forty-five minutes of discussion from the floor.

CLIFFORD L. JAMES: The educational situation which confronts many, but not all, departments of economics involves two very important elements. First, probably more than one-half of the students completing the elementary course will take no additional courses in economics; of the remainder, only a small percentage will go beyond a few courses in special fields. Second, the students of the first course will soon become voting citizens of a democratic social group, and will be expected to participate critically in the formation of public policy. One basic objective, therefore, of the first course should be to make it an independent and complete unit of study; i.e., additional courses would contribute primarily in a vertical fashion.

Another objective of the first course should be a clarification of the fundamental problems of economic analysis; namely, allocation of the means of production and levels of utilization. These problems refer to a system of production and consumption which is socially interdependent, and, consequently, they imply some institutional arrangement which co-ordinates individual activity in production and consumption, and which determines the level of such activity. In the United States, this institutional arrangement consists primarily of private property rights, private business enterprise, and co-ordination of production and consumption through markets; secondarily, of direct and indirect governmental action.

Since these problems are not amenable to controlled laboratory experimentation, a third objective should be to indicate briefly the nature of economic analysis and interpretation. Students should be prepared by examples to distinguish between statements of possible economic relationships, logically valid in a universal sense for assumed behavior in specified markets; and statements of probable, tentative relationships in an existing economic system which involve not only logical inference from assumptions and estimates but also supporting evidence for the assumptions and estimates as a test of their validity. And consequently, students should be prepared by reference to methods and data to expect interpretations of the operation of our economic system by experts to differ greatly with regard to the significant problems of allocation and utilization.

The fourth objective of the first course should be to explain the probable operation of the economic system of the United States. This objective, along with the first three, implies a cross-reference approach, i.e., selection and empha-

sis in the presentation of operational interpretations, indication of rejected interpretations, and the supporting evidence for a given interpretation. For the first course, the cross reference is complete when the reasons for divergence of interpretations are clearly demonstrated, such as the diverse estimates of the degree of competition, of the importance of anticipated conditions, of equilibrium tendencies, and of the influence of governmental action.

An explanation of how the economic system operates may exclude any reference to economic or social desirability. Since allocation and utilization are changing social processes influenced in part by changing governmental action, participation in the continuous formulation of public policy in a democratic social group is a responsibility of citizenship.

As a fifth objective, students should be made aware of this responsibility and of the process of evaluation which it involves. An excellent way in which to stimulate this awareness is to demonstrate in the first course the careful formulation of evaluations and proposals, especially those which link suggestions for the improvement of economic efficiency with the probable repercussions on the achievement of other important social objectives.

LELAND J. GORDON: A basic reason for including an introductory economics course in a college curriculum is to help students fit into society as intelligent economic citizens. Since probably half of the students taking introductory courses never have any further work in economics it is important that their introduction to the subject be stimulating and vital.

In recent years a tendency has developed to introduce students to the study of economics as consumers. Beginning as an analysis of the role of individual consumers in economic society and the problems which they face in performing their economic function, the study of economics then proceeds through distribution and exchange back to the production process.

Among the reasons why this approach may be considered preferable are the following:

1. It is an obvious fact that all individuals are consumers while less than one half play active roles as gainfully occupied workers. This simple fact alone is an eloquent argument for introducing college students to economics as consumers.

2. It is good teaching technique to start with students where they are. From that point they can be taken by degrees to the less familiar and more abstract principles and problems of economics.

3. If consumers are the ones who guide and control the economic system, is it not logical to study their wants first? From that point an introductory course may proceed to explain how goods are produced and the problems involved in that process.

4. The project method of teaching is better adapted to a course in consumer economics than to the usual types of courses. Consequently the introduction to and the study of economics can be vitalized by extensive use of this teaching device. Students can be introduced to the economic system at their point of daily contact—the retail market—which through the project method becomes their laboratory. Retail market surveys are helpful in preparing students for a subse-

quent analysis of principles and problems; this is particularly true of value theory which presents very real difficulties to beginning students.

5. A common criticism of prevailing methods of teaching economics is that we introduce immature beginning students, who do not yet have the right to vote, to tremendous social problems. This frequently leaves them with a sense of frustration because they, as individuals, can do little or nothing about problems of such magnitude. One distinct advantage in teaching economics of consumption is that students learn at an early stage the recurrent possibilities of immediate remedial action. For example, after having called to his attention the influence of custom and of fashion on his economic choices, a student may decide to substitute more rational choice in the future. It should be emphasized that the possibility of immediate individual remedial action does not in any way preclude recognition of the need for more basic and permanent correctives or controls.

KENNETH M. SPANG: Over- and underspecialization in the student's major subject are unfortunate consequences of the present-day curriculum in the liberal arts college. The curriculum, after having passed through the two stages of rigid requirement and free election, has in recent years been increasingly adapted to one form or another of the concentration and distribution system. There remains a need for further integrating the course of study for the undergraduate student of economics.

To be without a well-labeled plan when discussing matters of education is indeed a rare phenomenon! Accordingly, the "hourglass" plan is submitted as a solution to the above problem. The hourglass plan calls for a freshman year of general education, largely composed of survey courses in the various fields of science, both natural and social, as well as in the humanities. The end to be served is orientation in the major fields of study, a process made necessary by the varied capacities and backgrounds of freshmen in most American colleges.

The student majoring in economics would be called upon to specialize in the sophomore and junior years by electing numerous courses in the subject. The specific content of courses taken in college is not of decisive importance in the final summing up of the value of college training; rather it is the methods and attitudes developed in the courses which prove of greatest consequence. Every complete course of study should provide training in the four basic approaches to a body of knowledge; namely, the deductive, the empirical, the historical, and the synthetic. The subject matter of economics falls readily into components which are suited to these approaches. Although mathematics and the physical sciences are customarily associated with the deductive and empirical methods, respectively, precisely the same training can be developed in the study of economics.

After the period of specialization, that is, the neck of the hourglass, the process of synthesis must be introduced. There is pitifully little training offered in the synthetic method. Therefore the senior year should be devoted largely to survey courses of an entirely different character from those offered in the freshman year. Their purpose is to synthesize the work of the three previous years and in addition to reach out into the related fields of study. Two types of synthesis are useful: the historical synthesis and the cross-sectional synthesis. The former requires an

adaptation of the usual history course to give the student a comprehension of society in all its major aspects: economic, political, religious, scientific, and philosophical; the cross-sectional synthesis is to be designed to reveal such organic unity as society possesses at a given time and to apply normative considerations to society as a whole rather than to any one part of it.

To achieve an "approach" method to courses, instructors should define precisely the objectives of each course in terms of a given approach and should test consistently with these objectives in view. To achieve integration, survey courses, comprehensive examinations, comprehensive essays, reading periods, topical courses, etc., contribute materially.

In summary, the need is present for some plan of study which calls for orientation, followed by early specialization through definite approaches to economics, and for final integration of the major subject with other related fields.

GEORGE J. STIGLER: There seems to be a reasonable consensus regarding the general objectives of the elementary course in economics. The speakers agree—and I agree with them—that the general objectives are four:

1. To interest the student. This is fundamental, but I do not believe that it dictates any particular subject matter.
2. To acquaint the student with the more important facts concerning our economic system and perhaps with its historical background; i.e., to describe the subject matter.
3. To provide the student with the minimum analytical equipment necessary to understand our economic system and to appraise general economic policies.
4. To engage in discreet propaganda for "good" policies.

But there is less agreement when we turn to specific subject matters. Rather than engage in a running commentary on the very stimulating papers we have heard, I shall submit a few propositions of my own. I shall restrict myself to the same problem addressed by Professor James: the teaching of numerous sections of economic principles to moderately literate students who for the most part will take no additional work in economics.

First, the point of departure should be familiar to the students, and the most obvious topic with which to begin is the study of market prices. In this I agree with Professor Gordon and for some of the reasons which he advances. But I do not think that one should stay long with the problems of the consumer. In any case, the usual methodology is a very bad introduction to the first course and it is relatively meaningless to the student who has no background with which to apply it.

Second, there is too much technical analysis in the courses with which I am familiar. I think that there is a widespread confusion of technique with logical rigor. Fancy cost curves will soon be forgotten by the general student and I can testify that even the economics major must be retaught from scratch when he becomes a senior. In particular, I recommend the deletion of the following matters from the first course: (a) any complicated mathematical treatments of the elasticity of demand, (b) any geometrical distinctions between long-run and short-run cost curves, (c) any attention to the more tricky cases of imperfect

competition which abound in the learned journals and treatises, and (d) any discussion of controversial short-cuts such as the Keynesian multiplier. Judging from the number of errors in our textbooks on these matters, I think their authors should not be unwilling to co-operate by omitting these subjects.

Third, on the other hand, no elementary course can be very "realistic" without sacrificing everything else. Economic reality is terribly complicated. It cannot be fully described in a finite period of time and rigorous economic theory is about as palatable to sophomores as quantum mechanics when it approaches reality. The alternatives are a thorough discussion of a few important cases, such as perfect competition and simple monopoly, or a type of economic discussion in which analytical sloppiness is blended with impressionistic realism. If the students do not understand the nature of and the necessity for abstract reasoning, they or the teacher or both should be persuaded to join the army.

Finally, no one has yet mentioned a major problem found in the teaching of economics in the large university—the teaching staff. The combination of huge enrollments and parsimonious legislatures dictates extensive reliance on graduate assistants. These graduate students also can read and write English, although their ability to speak it is more debatable. I believe that this consideration reinforces my suggestion that the elementary course should concentrate on a few relatively simple theoretical cases and it argues against including political and sociological analyses, for such things may better be left unsaid than said badly.

HARLAN L. McCracken: 1. Is economics a science or an art? The question was properly raised by Mr. James as to whether or not the instructor in the general course in economic principles should make appraisals regarding the merit or demerit of various government measures and other economic issues of the day. Should the teacher of economics remain coldly analytical or attempt to indicate to students the difference between economic sense and nonsense?

Were we to follow the admonition given many years ago by Francis A. Walker and H. J. Davenport, we certainly would refrain from advice. As to Walker's views the reader would do well to consult that famous passage where the man with a vial of prussic acid inquired successively of the chemist, the physiologist, and the physician as to whether he should drink it.¹ The point was that although both the chemist and the physiologist knew that the prussic acid would kill the man if taken into the stomach, they, being *scientists*, must refrain from saying whether he ought to drink it or not.

In a similar vein, Davenport said: "Our business is not to approve or condemn . . . but only to make a coldly unsympathetic, impersonal and objective report of the actual ongoing of things."

The speaker is well aware of the dangers involved for the scientist who turns artist and says this ought to be done and this ought not. However, since approximately one-half of the people who take economic principles will never register for another economics course, yet, being college trained men and women, their opinions will be sought on public questions of the day, then we feel that it is incumbent upon the professor of economics to show by careful analysis the

¹ See Walker's *Political Economy*, p. 20.

wisdom of some governmental acts and the folly of others. When so many public questions are economic in nature, it is not only the privilege but the duty of the economist to indicate which measures if adopted will work well and which will work ill.

2. Professor Gordon has proposed that the first course in economics should be on consumer economics. The speaker would readily grant that the economics of consumption has been sadly neglected in our sophomore principles course. However, as stated above, one course in economics is all that many students will get. They are held by deans of engineering and agriculture to get only an introductory course. Now, if all they get is on the economics of consumption, they will be wholly ignorant of the basic principles of economics; namely, principles which have to do with value and price.

These are days when price pegging is being agitated on every hand. There is a strong tendency for trade associations and governments to peg the price high enough to cover the costs of the high cost producers. We are told that "if these break even then all others will make money and the country will prosper." This sounds most plausible to all but those who know the fundamentals of value and price. We know that in almost every line there are submarginal firms. If the price is pegged high enough to cover their costs, it will overstimulate production and penalize demand. More goods will be produced than can be sold at those high prices, so huge surpluses arise or plants are reduced to fractional capacity to keep from glutting the market. Students should learn in sophomore principles that buyers will practically never buy the entire output or keep producers operating at capacity if the price is fixed high enough to cover the costs of the high cost firm. Indeed, it is quite probable that depression and unemployment have been prolonged and made chronic because of wholesale price fixing designed to keep solvent submarginal firms. Professors and students alike should study again Schumpeter's purgative theory of the business cycle and realize that the major function of a depression is to eliminate high cost firms.

The discussion from the floor covered a wide range of topics.

MINUTES OF THE BUSINESS MEETINGS OF THE AMERICAN
ECONOMIC ASSOCIATION HELD IN NEW ORLEANS,
LOUISIANA, DECEMBER 28 AND 30, 1940

The first business meeting of the American Economic Association was held at 8:45 A.M., December 28, 1940, at the Roosevelt Hotel, New Orleans, Louisiana, President Mills presiding.

The minutes of the meeting of December 29, 1939, were approved as printed in the *Proceedings of the Fifty-Second Annual Meeting*, pages 403-404.

The following reports were read and approved:

1. The Secretary. (See page 425)
2. The Managing Editor. (See page 432)
3. The Treasurer. (See page 434)
4. The Finance Committee. (See page 436)
5. The Auditor. (See page 438)

The testimonial resolution, drafted in accordance with the minute of the Executive Committee of March 22, 1940, was read and approved.

Messrs. Copeland, Westerfield, and Hoover were appointed members of the Resolutions Committee.

Upon recommendation of the Executive Committee, it was voted to amend Article I, Section 2 of the Charter and Bylaws to read as follows:

There shall be *six* classes of members other than honorary: members paying an annual fee of \$5; *family members (two or more living at the same address, second membership without subscription to the publications of the Association) paying an annual fee of \$1; junior members (available to graduate students for three consecutive years only) paying an annual fee of \$3; subscribing members paying an annual fee of \$10; contributing members paying an annual fee of \$25 or more; and life members comprising those members who contribute \$200 or more in a single payment. Life members shall be exempt from annual fees.* (*Italics indicate changes*)

Adjourned.

The second business meeting of the American Economic Association was held at 8:45 A.M., December 30, 1940, in the Roosevelt Hotel, New Orleans, Louisiana, President Mills presiding.

The minutes of the December 28, 1940, meeting were read and approved.

It was VOTED to amend the Association's Charter and Bylaws by adding to Article VI the following: "or by a majority of votes cast in a mail ballot authorized by the Executive Committee."

It was VOTED to accept the report of the Committee on Statistics of Income and to refer it to the Executive Committee for their consideration at their spring meeting. The Secretary was instructed to write a letter of appreciation and thanks to the members serving on this Committee.

In the absence of Professor J. M. Clark and Frank H. Knight, the Secretary made a brief verbal report of the annual meeting of the American Council of Learned Societies and referred to the published summary of the Council's activities. Summaries were distributed and a copy was placed on file.

In the absence of Dr. E. G. Nourse, reference was made to the separately published annual report of the Social Science Research Council, a copy of which was ordered to be placed on file.

Mr. C. R. Noyes, the Association's representative on the Board of Directors of the National Bureau of Economic Research, submitted a report, which is published on page 444.

The following report of the Committee on Resolutions was read and approved:

WHEREAS, The members of the American Economic Association, meeting in its fifty-third annual session, December 27-30, 1940, at New Orleans, Louisiana, desire to express their appreciation to those who have contributed to the success of that session; therefore be it

Resolved, That the Secretary be instructed to convey the sincere thanks of the Association to Professor Robert W. Elsassner and Donald M. Halley and their associates on the Committee on Local Arrangements for the thorough and excellent preparations made for the meeting, for the efficient handling of detailed arrangements, and for the gracious hospitality which has been extended to the Association at New Orleans and which during a meeting period including a Sunday has made this session a social as well as an intellectual occasion; and be it further

Resolved, That the Secretary be instructed to convey the sincere thanks of the Association to Mrs. Elizabeth B. Schumpeter and Mrs. L. J. Buchan and to the other members of the Ladies' Hospitality Committee for all that they have done both for the members and for their wives to make the fifty-third session of the Association pleasant and enjoyable; and be it further

Resolved, That we extend to the officers and Executive Committee of the Association, to President Frederick C. Mills and the Program Committee in the preparation of the program, to participants in the program, and to Mr. C. Reinold Noyes and the members of the Committee on Transportation our appreciation of their valuable services; and be it finally

Resolved, That we extend to the management of the Roosevelt Hotel and the St. Charles Hotel and to co-operating local institutions our thanks for their contribution to the success of the conference.

MORRIS A. COPELAND, *Chairman*
CALVIN B. HOOVER
RAY B. WESTERFIELD

The Secretary presented the certification of election:

In accordance with the bylaws on election procedure, I hereby certify the results of the recent balloting, and present the reports of the Nominating Committee and the Committee on Elections.

The Nominating Committee, consisting of John M. Clark, Columbia University, Chairman, William C. Clark, Finance Ministry, Canada, Earl J. Hamilton, Duke University, John Parke Young, Occidental College, Corwin D. Edwards, Federal Trade Commission, and Harold M. Groves, University of Wisconsin, presented to the Secretary the following list of nominees for the respective offices:

For President

Isador Lubin
Sumner H. Slichter

For Vice-Presidents

James C. Bonbright
Walton H. Hamilton
Benjamin H. Hibbard
John Ise

Representative to Social Science

Research Council
Harold A. Innis
Simon Kuznets

For Executive Committee

Anne Bezanson
Stacy May
Winfield W. Riefler
Edwin E. Witte

For Executive Committee (unexpired term)

Norman S. B. Gras
William A. Mackintosh

Representative to American Council

of Learned Societies
Clarence E. Ayres
Edgar S. Furniss

The Committee on Elections (Henry C. Simons, Chairman, Elmo P. Hohman, and James Washington Bell) prepared biographical sketches of the candidates and ballots were distributed early in November. The canvass of the ballots was made on December 11, 1940, and the results were filed with the Secretary.

From the report of the Committee on Elections I have the following information:

Number of envelopes without names for identification	19
Number received too late to count	18
Number of defective ballots	—
Number of legal ballots	1,500
Number of returns from the mail ballot	1,537

On the basis of the canvass of the votes cast, I certify that the following persons have been duly elected to the respective offices:

President (for term of one year)

Sumner H. Slichter

Vice-Presidents (for term of one year)

James C. Bonbright

Walton H. Hamilton

Members of the Executive Committee (for term of three years)

Stacy May

Edwin E. Witte

Member of Executive Committee (for term of one year)

Norman S. B. Gras

Representative to the Social Science Research Council (for term of three years)

Simon Kuznets

Representative to the American Council of Learned Societies (for term of four years)

Edgar S. Furniss

James Washington Bell, *Secretary*

Upon motion of W. C. Mitchell, it was VOTED to authorize the appointment, by the President, of a special committee to consider and to report on the advisability of becoming an affiliated member of the American Association for the Advancement of Science.

Upon motion of M. A. Copeland, the Executive Committee, or a committee appointed upon authorization of the Executive Committee, was instructed to explore the general problem of certifying by the Association the competency of "economists."

Upon motion by D. L. Wickens, it was VOTED to instruct the Executive Committee to explore further the possibilities of enlarging the usefulness of our Association by forming or encouraging the organization of local chapters.

Adjourned.

REPORT OF THE SECRETARY OF THE ASSOCIATION FOR THE YEAR ENDING DECEMBER 12, 1940

Article IV of the charter and bylaws of the Association provide that "the secretary shall keep the records of the Association and perform such other duties as the Executive Committee may assign to him."

The following report includes the minutes of the meetings of the Executive Committee held during the year together with explanatory comments on some of the actions taken by the Executive Committee and a few general observations on problems which have come up in the secretarial office during the year.

1. Minutes of the second meeting of the 1940 Executive Committee:

The second meeting of the 1940 Executive Committee was held in the offices of the Social Science Research Council, New York City, March 22 and 23, 1940. There were present: President Mills, presiding, Miss Newcomer, and Messrs. Angell, Bell, Dewey, Homan, Hoover, Stocking, Viner, and Westerfield.

The minutes of the December 29, 1939, meeting were read and approved as published in the March, 1940, supplement of the *American Economic Review* (page 406).

President Mills discussed the agenda of the three-day meeting, March 21 to 23, of the Program Committee, Executive Committee, and Nominating Committee, and reported progress on the organization of the program for the 1940 meeting in New Orleans.

Dr. Dewey commented briefly on the work of the Editorial Office and indicated that advance notices of the 1940 meeting at New Orleans would be published in the June number of the *Review*.

The present cash position of the Association and the cost and market value (as of March 12) of stocks and bonds were reported by the Treasurer. The investment policy of the Finance Committee was briefly described.

Expenses involved in conducting the 1939 annual meeting were reviewed and reports from the chairman of the Local Arrangements Committee (C. A. Kulp) and Director of Publicity (W. C. Clark) were submitted.

In addition to the sum of \$200 already appropriated for publicity for the 1940 meeting, it was VOTED to authorize an expenditure of \$300 for program purposes, this amount to be put at the disposition of the President and the Secretary.

It was VOTED to accept with gratitude a grant from the Social Science Research Council, enabling the chief participants to meet in conference in advance of the meeting.

The Secretary announced the publication of the revised edition of our general information booklet. It was suggested that instead of a random selection of representative *Review* articles in the booklet, the sample consist of all articles published during the preceding year.

The Secretary reported on the size and cost of the *Proceedings* appearing with the March number. No recommendation was made as to change in the price of the *Proceedings*, but it was observed that the members are getting a good deal for their money.

The Secretary submitted printer's samples of new style and format for the *Proceedings* and the *Review* for the consideration of the Committee. No action was taken. The Editor was asked to give the matter his consideration.

The Secretary was authorized to run announcements of applicants for positions in the placement section of the *Review* for the remainder of this year without charge. It was suggested that the Secretary follow up the experience of applicants for positions, so that we may have some data upon which to base future action. Our experience on this placement service is to be reviewed at the December meeting.

Requests for free subscriptions to the *Review* were reported by the Secretary and his action with regard to these applications was affirmed.

It was VOTED to authorize the Secretary, at his discretion, to extend complimentary memberships (a) to all past presidents of the Association reaching the age of retirement (65) at their respective institutions, and (b) to veteran members who apply for the privilege of keeping their names on our roll without receiving copies of the *American Economic Review*.

It was VOTED to amend Article I, Section 2, of the charter and bylaws to provide junior memberships for graduate students, with dues of \$3 a year for a period of not more than three years.

It was VOTED to amend Article I, Section 2, of the charter and bylaws to make provi-

sion for a reduction of dues in the case of two or more members in the same family, living at same address; to wit: with the payment of regular annual dues, plus a \$1 fee for each additional member of the family, all are entitled to the rights and privileges of membership with one subscription to the Association's publications.

New nominations for foreign honorary memberships were submitted for consideration at the December meeting.

Further information was requested with regard to the activities of the Committee on Statistics of Income. Before being discharged, a report of the status of this Committee is expected.

It was VOTED to approve the proposal from the Blakiston Company that the President appoint a "committee of review" to select reprints from the *American Economic Review* and other learned periodicals to be published in book form. It is understood that the Association will not be committed to any expenses which may be involved in this enterprise and that the publishing house will use the name of the Association only in such ways as may be authorized by the officers of the Association.

No action was taken on a proposal to formulate and report an expression of the attitude of the Association concerning the current Census controversy.

After an extended discussion of election procedure, it was VOTED to propose to the members of the Association that: 1. The bylaw concerning the eligibility qualification of the chairman of the Nominating Committee be broadened to read "a past officer" rather than "a former president." 2. The Nominating Committee submit their recommendations of two names for each office as heretofore, but that the names for the office of president be voted upon by a joint body consisting of the Nominating Committee and the Executive Committee, provided, also, that the Executive Committee have power to request the Nominating Committee to submit additional nominees for president. 3. The ballot submitted to the membership of the Association appear in the usual form, except that for president one name be submitted with space for writing in an optional name.

The above vote was rescinded, except item "1," after a full debate in conference with the members of the Nominating Committee, and it was VOTED to refer the matter of election procedure to the membership of the Association by a ballot to be mailed by May 15 if practicable, asking for an expression on the following propositions: 1. Are you satisfied with the present election procedure? 2. Do you favor the abolition of the mail ballot method of electing officers? 3. Indicate your preference with regard to the above proposals ("2" and "3" in the previous paragraph) for change in the procedure. 4. Submit any additional proposals you desire for the guidance of the Executive Committee at their December meeting. The Secretary and President were instructed to write a brief history of our election experience for the information of our members to accompany the ballot, these to be mailed along with preliminary announcements for the 1940 meeting at New Orleans.

The appointment by the President of C. Reinold Noyes as representative of the Association on the National Bureau of Economic Research, for a term of five years, was confirmed.

It was VOTED to elect Davis R. Dewey to complimentary membership in the Association. The Secretary was instructed to (1) draw up a resolution expressing the appreciation of the Association of his long and valuable services, this tribute to be engrossed on a parchment or scroll, and (2) to arrange for the signing of a testimonial by all members present at the general meeting.

The Secretary-Treasurer submitted his resignation and the matter of permanent secretariat and joint editorship was reviewed. Without formal action, the opinion of the Committee was again expressed to the effect that separation of function and affiliation with two universities was preferred to consolidation of the two offices into a permanent, independent office with its costly overhead. The Secretary's resignation was not accepted.

Professor Paul T. Homan, of Cornell University, was elected to serve as Editor of the *American Economic Review*, to succeed Dr. Davis R. Dewey, beginning January 1, 1941, at a salary of \$2,500 per annum.

The usual expenses of the members of the Executive and Program Committees were authorized.

C. Reinold Noyes was appointed chairman of the Committee on Transportation and Promotion for the annual meeting.

The remainder of the meeting was devoted to an extensive discussion of the classification of specialized fields of economics and of the program for the annual meeting.

Adjourned.

2. Minutes of the third meeting of the 1940 Executive Committee:

The third meeting of the 1940 Executive Committee was held at the Roosevelt Hotel, New Orleans, Louisiana, December 27, 1940, at 12:00 M. There were present: President

Mills, presiding, and Messrs. Anderson, Bell, Brown, Dewey, Homan, Hoover, Viner, and Westerfield.

The minutes of the March 23, 1940, meeting were read and approved.

It was VOTED to offer an amendment to Section VI of the Charter and Bylaws, permitting amendments to be made by mail referendum. (See Minutes of the Business Meeting, December 28, 1940.)

It was VOTED to submit to members by mail ballot the proposed method of selecting the president of the Association (see March 23, 1940, minutes) by vote of an "electoral college," the mail ballot to be accompanied by a brief historical note explaining reasons for change in procedure, ballot to be mailed with bills for membership dues or other convenient time prior to election in the fall.

It was VOTED to authorize incidental expenditures involved in conducting the New Orleans meeting.

It was VOTED to approve expenses reported by the Secretary-Treasurer for the Dewey testimonial award and dinner.

Adjourned.

3. Minutes of the first meeting of the 1941 Executive Committee:

The first meeting of the 1941 Executive Committee was held at the Roosevelt Hotel, New Orleans, at 5:00 P.M., December 30, 1940. There were present: Vice-President Bonbright, presiding, and Messrs. Anderson, Bell, Brown, Dewey, Homan, Mills, Viner, and Westerfield.

The minutes of the December 28, 1940, meeting were read and approved.

It was VOTED to authorize expenditures involved in the shift of Editorial Office from Cambridge to Ithaca as requested by Dr. Dewey.

The Secretary was instructed to use his own discretion with regard to the shifting or absorption of the Canadian War Tax on our publications and to report on this matter at the spring meeting.

With the advice and consent of the Executive Committee, the following members were appointed to the Editorial Board for a term of three years: Howard S. Ellis and Ben W. Lewis.

The Secretary submitted a report on changes in the number of applications published in the placement announcement section of the *Review* since its establishment in December, 1939. The list is currently kept active by requiring renewals of applicants for listing in each number of the *Review*.

The question of cover stock and style format of the Association's publications was left in the hands of the Editor and Secretary for future consideration and report.

The Secretary reported details on costs of the information booklet, 1940 *Handbook*, and of the *Proceedings*.

The Secretary was instructed to publish the *Proceedings* at an early date if possible, and to include not only the papers of the six related sessions as originally planned but all other material for which publication arrangements for the *Proceedings* have been made.

It was VOTED to authorize a committee consisting of P. T. Homan, J. D. Brown, and J. W. Bell to draw up a contract with the Blakiston Company in line with the proposal to reprint in book form articles from the *Review*, the *Proceedings*, and other journals.

It was VOTED to continue Roy C. Osgood, Charles C. Wells, and James Washington Bell as members of the Finance Committee and to instruct the Secretary to convey to Messrs. Osgood and Wells the thanks and appreciation of the Association for the service they have rendered.

John E. Walker was reappointed as Counsel for the Association for a term of three years.

VOTED to authorize the Secretary to absorb the expenses involved in the use of our mailing list by the National Resources Planning Board.

VOTED to authorize the appointment of a committee by the President and Secretary to consider further the subject of classification of personnel for our use and for other purposes such as that suggested in Mr. Copeland's motion at the Business Meeting, December 30.

VOTED to refer to the committee appointed by the President to consider our relationship with the American Association for the Advancement of Science the question of constituent membership in the American Council on Education.

The report of the Committee on Statistics of Income was tabled for consideration at the spring meeting.

VOTED to approve the extra \$50 expense item assessed by the Committee on Local

Arrangements for author's corrections on the joint program for the Philadelphia meeting of 1939.

In view of the changed conditions brought about by defense activities, the Secretary was instructed to communicate with the officials of the allied social science associations meeting in Chicago that the American Economic Association would prefer to meet elsewhere than in Washington in December, 1941. The Secretary was instructed to present the Executive Committee's strong preference for New York City but to comply with the desires of the affiliated associations (particularly the American Statistical Association) if they were determined to go elsewhere. Chicago was discussed as the logical probability for 1942 meeting place.

Adjourned.

In conformance with the March minute of the Executive Committee on election procedure, the Secretary prepared a draft for an opinion ballot to be submitted to the members of the Association together with a brief history of our election experience. This material was sent to the members of the Executive Committee for their approval. In view of the diverse reactions received, it was decided to abandon the idea of a mail ballot until the full significance of proposed changes could be discussed at the annual meeting in December. In order to clarify the issues involved, Professor J. M. Clark, chairman of the Nominating Committee in 1940, submitted a communication which was published in the June issue of the *Review*, pages 458-460.

An interesting experiment has been attempted this year in preparing the program for the annual meeting. The participants in the six sessions on related topics gathered in New York for a preliminary two-day meeting, September 16-17, to discuss first drafts of their papers. This preview was made possible by a special grant from the Social Science Research Council. The current vital interest in the persistent problems with which these papers deal prompted the Executive Committee to instruct the Secretary to advance the date of editing the volume and arrangements have been made to mail a special volume of the *Proceedings* as early as possible after the annual meeting.

The biennial handbook of the Association was edited in the Secretary's office and issued in June. This handbook is in effect a simple directory, although some new features are added. It contains a geographical enumeration and classification of members and subscribers, statistical summaries, and a roster of officers of organizations with which the Association is affiliated, and of the regional economic associations. A revision of the "Who's Who" in the Association was not attempted, since it was felt that such a volume would be more effective if a suitable classification of economists could be included. The perfection of practical groupings of fields of specialization is important both from the point of view of the editor of the *Review* (classification of articles, books, doctoral dissertations, subject-author indexes) and of the secretarial office. Numerous inquiries have reached the Secretary calling for specialized lists of economists in the several fields of our subject; for instance, in connection with the Social Science Research Council, which, in collaboration with the National Resources Planning Board, is compiling a national roster of scientific and specialized personnel, and the American Council of Learned Societies in connection with a *Biographical Directory of American Scholars*. Frederick S. Deibler, of Northwestern University, and Harold G. Moulton, of Brookings Institution, have been appointed members of the advisory committee by the Council.

A revised issue of our information booklet was also issued during the year.

In last year's report the Secretary called attention to the placement service initiated in the *Review* which consists of the publication of positions and of those seeking positions. On the whole, the operation of this placement information service seems to be successful if measured in terms of applications listed and inquiries received. In order to keep the number of applications from becoming too bulky and old, all those on the September list were notified that their applications would not be run in the December issue unless renewed. Vacancies still remain unreported.

The Secretary attended the annual meeting of the American Council of Learned Societies and conference of secretaries of the constituent societies held in Washington, D.C., January 25-27. Out of the secretaries' discussion of the relations between the Council and the constituent societies and the relations between the societies themselves, there emerged several suggestions for more effective interchange of information. The printed report of the operations of the A.C.L.S. is referred to in the minutes of the Business Meeting.

The Secretary edited the *Proceedings of the Fifty-Second Annual Meeting* and carried on the regular business of the Association.

The following appointments were made by the President:

Nominating Committee

John M. Clark, Chairman
William C. Clark
Earl J. Hamilton
John Parke Young
Corwin D. Edwards
Harold M. Groves

Program Committee

James W. Angell
Calvin B. Hoover
C. Reinold Noyes
Frank W. Fetter
Paul T. Homan
Elizabeth B. Schumpeter
James Washington Bell

Committee on Elections

Henry C. Simons, Chairman
Elmo P. Hohman
James Washington Bell

Auditor

Arthur Andersen and Company

Committee on Local Arrangements

Robert W. Elsasser, Chairman

Committee on Transportation and Promotion

C. Reinold Noyes, Chairman
Robert D. Calkins
George W. Stocking

Calvin B. Hoover
 Robert W. Elsasser
 Morris Copeland
 Edward H. Chamberlin
 American Year Book Corporation Representative
 Frederick S. Deibler
 American Documentation Institute Representative
 Victor S. Clark

The following members were appointed by the President to represent the Association on the occasions indicated:

Inauguration of the President of:

Northeastern University
 Beaver College
 Hunter College
 Grinnell College

Edward H. Chamberlin
 Marvin L. Fair
 George W. Edwards
 Earl D. Strong

Conference on Science, Philosophy, and Religion in Their Relation to the Democratic Way of Life

Eli Ginzberg
 Morris A. Copeland

Eighth American Scientific Congress
 Dedication of Buildings, University of Colorado

Frederick A. Bushee

Forty-Fourth Annual Meeting, American Academy of Political and Social Science

Henry F. Grady
 Clair Wilcox
 Frank W. Fetter

The use of the mailing list was granted to the following:

Illinois Central System

To mail schedule of special train from Chicago to New Orleans

National Resources Planning Board

In connection with a national roster of scientific and specialized personnel

The following changes in the mailing list have taken place during the year ending December 12, 1940:

Total members and subscribers in December, 1939		4,258
Annual members in December, 1939	2,906	
Members removed in 1940:		
Resigned	58	
Lack of address	17	
Nonpayment of dues	99	
Died	23	197
		<hr/>
		2,709
Members added in 1940		380
		<hr/>
Total annual members in December, 1940		3,089
Total life members in December, 1940		40

Honorary members in December, 1939	20	
Removed in 1940	1	
Total honorary members in December, 1940		19
Total members in December, 1940		3,148
Subscribers in December, 1939	1,292	
Removed in 1940	185	
	1,107	
Added in 1940	220	
Total subscribers in December, 1940		1,327
Total members and subscribers in December, 1940		4,475
Net gain		217

The above increase of 217 compares with the net gain of last year of 164; or in terms of annual members a gain of 183 compared to 142. I wish to thank those members who have sent in nominations. It is by virtue of such voluntary co-operation that our membership increases, and it obviates the need of membership campaigns.

It is with regret that the names of the following persons have been removed from our active membership list, notice of their deaths having been received during the year:

Carl G. Barth	Edmund Platt
Barron G. Collier	Carroll M. Powers
Charles R. Crane	Joseph H. Prior
Mercer G. Evans	George E. Putnam
August F. Fehlandt	James W. Putnam
Harold Hirsch	David B. Rushmore
John A. Hobson (Honorary Member)	Samuel Sigilman
Jacob H. Hollander	Guy E. Snider
Olin Ingraham	George W. Stephens
Robert E. Landman	Frank W. Taussig
William T. McCaffrey	George A. Warfield

Respectfully submitted,

JAMES WASHINGTON BELL, *Secretary*

REPORT OF THE MANAGING EDITOR OF THE AMERICAN ECONOMIC REVIEW FOR THE YEAR ENDING DECEMBER, 1940

The expenses during 1940 by principal items were as follows:

Printing (paper, reprints, postage, etc.)	\$ 6,771.73
Editorial	2,500.00
Clerical	3,121.65
Supplies	395.15
Contributors	1,443.50
	<u>\$14,232.03</u>

There is, however, an outstanding printing bill which has not yet been audited, amounting to approximately \$100.00. Taking this into account, the above expenditure is in excess of the budget appropriation by \$132.03. The average number of copies printed this year has been 4,975, as compared with 4,625 in the previous year; and the number of pages for the entire volume was 940, an increase of 8 pages over last year.

A tentative budget for 1941, on the basis of printing 5,000 copies is as follows:

Printing (paper, reprints, postage, etc.)	\$6,800.00
Editorial	2,500.00
Clerical	3,200.00
Supplies	400.00
Contributors	1,600.00

It should be noted, however, that this is only a tentative budget, and the new managing editor should be free to make such changes as he and the Executive Committee think desirable.

TABLE I—EXPENDITURES

Year	Printing	Salary of editor	Payments to contributors	Clerical	Supplies	Totals
1920	\$6,656.31	\$1,500.00	\$1,122.75	\$1,595.64	\$307.20	\$11,181.90
1921	5,646.97	1,500.00	64.50	1,472.50	319.97	9,003.94
1922	4,795.28	1,500.00	—	1,370.00	314.77	7,980.05
1923	5,032.59	1,500.00	—	1,650.09	437.86	8,620.54
1924	5,423.28	1,500.00	1,110.25	1,464.01	305.32	9,802.86
1925	5,713.01	1,500.00	1,133.50	1,757.32	406.36	10,510.19
1926	5,332.24	1,500.00	1,128.00	1,589.86	323.43	9,873.53
1927	5,619.20	1,500.00	1,013.75	1,806.50	297.25	10,236.70
1928	5,321.95	1,500.00	1,190.50	1,956.50	375.37	10,344.32
1929	4,927.62	1,500.00	1,328.75	2,004.50	261.72	10,022.59
1930	5,386.67	2,500.00	1,447.75	2,253.00	347.80	11,935.22
1931	5,399.94	2,500.00	1,454.75	2,300.00	327.60	11,982.29
1932	5,143.23	2,500.00	1,451.00	2,300.00	386.13	11,780.36
1933	4,606.07	2,500.00	1,408.25	2,436.00	380.75	11,331.07
1934	4,670.43	2,500.00	1,384.75	2,420.00	326.12	11,301.30
1935	5,109.53	2,500.00	1,357.50	2,540.00	445.08	11,962.11
1936	5,316.56	2,500.00	1,450.00	2,540.00	345.12	12,151.68
1937	5,908.40	2,500.00	1,541.75	2,751.00	364.72	13,065.87
1938	6,078.35	2,500.00	1,438.15	2,990.00	452.96	13,459.46
1939	6,471.45	2,500.00	1,453.50	3,032.10	389.63	13,846.68
1940	6,771.73	2,500.00	1,443.50	3,121.65	395.15	14,232.03

During the year, 857 new books were received, as compared with 993 in 1939; 253 persons have co-operated in writing leading articles, communications and reviews. The number of leading articles published is 39.

The following persons have served as editors during the past year: Professors Arthur R. Burns and B. F. Haley, whose terms expire this year; Professors Fritz Machlup and Royal E. Montgomery, whose terms expire in 1941; Professors H. M. Groves and E. A. Kincaid, whose terms expire in 1942.

The usual table of expenditures is presented.

Respectfully submitted,

DAVIS R. DEWEY, *Managing Editor*

REPORT OF THE TREASURER OF THE ASSOCIATION FOR THE YEAR ENDING DECEMBER 12, 1940

The total resources of the Association as shown in the balance sheet exhibits of the auditor's report have decreased during the fiscal year from \$67,264 to \$67,008. No significant changes have occurred in our assets and liabilities. Expenses have merely increased more than our income.

During the past year the scale of our operations has grown to a new peak. Total income of \$18,662 is larger than last year by \$1,701, and total expenses, \$17,646, are larger by \$3,798. Net income for the year is \$1,016 compared to \$3,112 for 1939.

The chief changes in income are: dues, up \$995 on account of increased membership (182, exclusive of subscriptions), and increase in investment income of \$458. Increased expenses are due to administrative and operating expenses (\$1,047) occurring as the result of increases in salaries, and expenses in

INVESTMENT PORTFOLIO

Year	At Par	Cost			Market
	Bonds	Bonds	Stocks	Total	Stocks and Bonds
1925	\$25,000	\$24,661.75		\$24,661.75	
1926	27,000	26,623.25		26,623.25	
1927	29,000	28,688.45		28,688.45	
1928	29,000	28,633.45		28,633.45	
1929	31,000	30,569.48		30,569.48	
1930	31,000	32,439.48		32,439.48	\$32,635.40
1931	39,500	39,134.48		39,134.48	32,307.44
1932	40,500	41,134.48		41,134.48	33,239.70
1933	33,500	32,962.48	\$ 3,954.23	36,916.71	31,522.50
1934	31,500	30,939.48	3,954.23	34,943.71	34,714.00
1935	16,000	15,280.48	28,114.50	43,394.98	50,338.72
1936	17,000	16,260.13	33,712.57	49,972.70	62,991.00
1937	20,000	19,160.91	37,399.20	56,560.11	52,064.75
1938	22,000	20,180.95	38,302.20	58,483.15	58,598.88
1939	22,000	20,039.57	41,155.95	61,195.52	61,529.38
1940	25,000	22,519.80	41,155.95	63,675.75	60,553.88*

* As of November 30, 1940; auditor's figure of \$61,281.89 as of December 12, 1940.

connection with the New Orleans meeting and the shift in the Editorial Office. Publication costs increased \$2,240 as a result of the publication of 5,000 copies of the *Handbook* (\$822), a large issue of the *Proceedings* (444 pages compared to a normal 300-odd), and increases in quantity of the *Proceedings* and of the *Review* (4,600 to 5,000). A small decrease in advertising income (\$370) augments the expense item.

The accompanying tables show changes from 1925 to date in our investment holdings (at cost and at market) and in income from investments. Market values again show some shrinkage below cost. Different report dates account for the discrepancy between market figures in the table and those found in the auditor's report. The sum of \$2,401 new money was put into the investment

RETURN ON INVESTMENTS

	Bonds	Stocks	Total	Rate of Return
1925	\$1,350.00		\$1,350.00*	
1926	1,410.00		1,410.00*	
1927	1,524.70		1,524.70†	
1928	1,642.77		1,642.77†	
1929	1,575.44		1,575.44†	
1930	1,695.21		1,695.21	5.22%
1931	1,886.81		1,886.81	4.82
1932	2,014.36		2,014.36	4.89
1933	1,679.49	\$ 108.57	1,789.06	4.84
1934	1,593.13	218.07	1,811.20	5.18
1935	1,022.96	680.70	1,703.66	3.92
1936	801.77	1,597.63	2,399.40	5.00
1937	884.87	2,689.62	3,574.49	6.31
1938	928.04	2,063.02	2,991.06	5.11
1939	978.79	1,781.52	2,760.31	4.51
1940	1,037.56	2,182.46	3,220.02	5.06

* Estimated income for year.

† Certificate of deposit interest included.

fund during the year, and \$3,220 was taken out in interest and dividends. Income from investments represents a 5.06 per cent return on the cost of securities.

The members of the Association may be assured that our finances are in good shape and that our assets are being put to good use.

Respectfully submitted,

JAMES WASHINGTON BELL, *Treasurer*

REPORT OF THE FINANCE COMMITTEE

The following changes in our investment account have been made during the current year:

	SALES		Selling Price	Gain	Loss
	Par Value	Cost			
Alabama Power Co., 1st Lien and Ref. Mtg., 5%	\$1,000.00	\$1,042.50	\$1,039.18		\$3.32
Gulf States Steel Co., 1st (closed) Mtg. Sinking Fund, 4½%	1,000.00	966.93	1,049.03	\$82.10	
PURCHASES					
	Par Value	Cost			
Dominion of Canada, Ref. Loan, 5%	\$1,000.00	\$ 802.85			
Interlake Iron Corp., Conv. Deb., 4%	1,000.00	980.33			
Shawinigan Water and Power Co., 1st Mtg., 4½%	2,000.00	1,801.15			
United Stockyards Corp., Col. Trust, Series "A," 4¼%	1,000.00	905.33			

It will be observed that no changes were made in our holding of stocks. A few shifts were made in bonds and some new ones added.

As of November 30, 1940, our security holdings are listed below, together with cost and market value. The market figures are compared with those of last year.

	STOCKS	Value	
		Market or Last Sale	11/30/40
<i>Number of Shares of Preferred Stock</i>	<i>Cost</i>	<i>12/2/39</i>	
15 Chesapeake and Ohio Railroad Co., 4%, "A"	\$ 1,328.24	\$ 1,410.00	\$ 1,425.00
14 Glidden Co.	735.00	560.00	588.00
10 Household Finance Corp., 5%	903.00	1,040.00	1,078.75
25 International Harvester Co.	3,686.63	4,100.00	4,240.63
<i>Number of Shares of Common Stock</i>			
25 Chesapeake and Ohio Railroad Co.	1,309.07	1,037.50	1,050.00
55 Commonwealth Edison Co.	1,525.51	1,711.88	1,540.00
50 General American Transportation Corp.	3,084.30	2,712.50	2,662.50
100 General Electric Co.	2,738.19	3,875.00	3,312.50
50 General Motors Corp.	2,057.47	2,643.75	2,487.50
58 Glidden Co.	1,635.72	1,051.25	826.50
50 Kroger Grocery and Baking Co.	1,297.22	1,400.00	1,412.50
25 Liggett and Myers Tobacco Co., "B"	2,018.13	2,500.00	2,375.00
50 Link-Belt Co.	2,524.15	1,825.00	1,925.00
50 Mesta Machine Co.	2,007.37	1,668.75	1,800.00
50 J. C. Penney Co.	2,878.28	4,668.75	4,400.00
50 Procter and Gamble Co.	2,459.72	3,175.00	2,700.00
50 Standard Brands, Inc.	888.15	281.25	331.25
50 Standard Oil Co. of California	2,097.27	1,268.75	893.75
50 Union Carbide and Carbon Corp.	2,867.88	4,375.00	3,550.00
100 Wayne Pump Co.	3,114.65	2,300.00	2,025.00
	<u>\$41,155.95</u>	<u>\$43,604.38</u>	<u>\$40,623.88</u>

Par Value		BONDS			Value	
		Int. Rate	Due	Cost	Market or Last Sale	
					12/2/39	11/30/40
\$2,000	Central Illinois Electric and Gas Co., 1st Mtg.	3¾	1964	\$ 2,010.00	\$ 1,990.00	\$ 2,105.00
3,000	Chicago, Terre Haute and Southeastern Railway Co., 1st and Ref.	5	1960	2,012.12	1,800.00	1,620.00
1,000	Dominion of Canada, Ref. Loan	5	1943	802.85		850.00
1,000	Erie Railroad Co., Ref. and Imp. Mtg.	5	1975	932.50	147.50	171.25
1,000	Florida East Coast Railway, 1st	4½	1959	646.52	560.00	611.25
2,000	Gary Electric and Gas Co., 1st Lien Col. Series "A"	5	1944	1,920.40	2,000.00	2,020.00
2,000	Grand Trunk Western Railway Co., 1st Mtg. 50-year	4	1950	1,855.45	1,580.00	1,567.50
2,000	Gulf States Steel Co., 1st (closed) Mtg. Sinking Fund	4½	1961	1,933.85	1,935.00	2,107.50
1,000	Interlake Iron Corp., Convert. Deb.	4	1947	980.33		
2,000	Nevada-California Electric Corp., 1st Mtg.	5	1956	1,895.40	1,595.00	1,720.00
1,000	Pennsylvania Railroad Co., 40-year Gold Deb.	4½	1970	945.00	885.00	940.00
1,000	Pennsylvania Railroad Co., Gen. Mtg. Series "D"	4¼	1981	986.50	950.00	1,042.50
2,000	Shawinigan Water and Power Co., 1st Mtg.	4½	1967	1,801.15		1,702.50
1,000	Southern Illinois and Missouri Bridge Co., 1st Mtg. 50-year	4	1951	822.00	710.00	740.00
2,000	Southern Railway Co., 1st Consol. Mtg.	5	1994	2,070.40	1,760.00	1,822.50
1,000	United Stockyards Corp. Col. Trust Series "A"	4¼	1951	905.33		910.00
				<u>\$22,519.80</u>	<u>\$15,912.50</u>	<u>\$19,930.00</u>

The Erie Railroad bond is still in default, but conversion arrangements are in the process of being worked out satisfactorily.

In the light of continued uncertainty and of the exigencies of war, no significant changes in our investment policy seem advisable. Only special conditions affecting individual securities prompt action one way or another. A delay in making purchases in the spring would have enabled us to get our meager purchases at blitzkrieg prices, but such an eventuality would have been sheer good fortune. A decline in our capital holdings need cause no apprehension. Income in the form of interest and dividends remains highly favorable either on the cost or market basis.

Respectfully submitted,

ROY C. OSGOOD, *Chairman*
CHARLES C. WELLS
JAMES WASHINGTON BELL

REPORT OF THE AUDITOR

December 18, 1940

*Executive Committee,
American Economic Association,
Evanston, Illinois*

DEAR SIRs:

We have made an examination of the balance sheet of the American Economic Association as at December 12, 1940, and of the related statement of income and expenses for the period from December 13, 1939, to December 12, 1940. In connection therewith we have examined or tested accounting records of the Association and other supporting evidence and have reviewed the accounting procedures of the Association by methods and to the extent we deemed appropriate, but we did not make a detailed audit of the transactions. A similar examination was made for the period from December 15, 1938, to December 13, 1939. Further comments regarding the scope of our examination are contained in subsequent pages of this report.

The following exhibits are included in this report:

Balance sheet—December 12, 1940	Exhibit 1
Statement of income and expenses for period from December 13, 1939, to December 12, 1940	Exhibit 2

Results of Operations

Net income for the year ended December 12, 1940, was \$1,016.13 as compared with \$3,112.92 for the preceding period, as shown by the following condensed comparative summary:

Particulars	Year Ended Dec. 13, 1939	Dec. 12, 1940	Increase or Decrease
Income from—			
Dues	\$14,500.92	\$15,456.31	\$ 955.39
Interest and dividends on investments	2,665.45	3,123.66	458.21
Other sources (net)	205.53	82.66	288.19
Total income	<u>\$16,960.84</u>	<u>\$18,662.63</u>	<u>\$1,701.79</u>
Expenses—			
Administrative and other operating expenses	\$ 6,244.97	\$ 7,291.98	\$1,047.01
Cost of testimonial to Dr. Davis R. Dewey		854.00	854.00
Reduction in carrying value of inventory of <i>Economic Essays</i>	713.57		713.57
Publication expenses	15,672.96	17,913.49	2,240.53
Publication income	8,783.58	8,412.97	370.61
Total expenses	<u>\$13,847.92</u>	<u>\$17,646.50</u>	<u>\$3,798.58</u>
Net income	<u>\$ 3,112.92</u>	<u>\$ 1,016.13</u>	<u>\$2,096.79</u>

The increase in income from dues reflects the increase in the membership of the Association during the period under review. The membership at the beginning and end of the period as reported by the Secretary was as follows:

Classification Members—	Number of Members	
	Dec. 13, 1939	Dec. 12, 1940
Annual	2,906	3,089
Life	40	40
Honorary	20	19
	<u>2,966</u>	<u>3,148</u>

Interest on bonds owned was accounted for and dividends received on stocks were compared with amounts reported in published records of dividend disbursements. Interest coupons from April 1, 1938, through October 1, 1940, on \$1,000 principal amount of Erie Railroad Company refunding and improvement 5 per cent mortgage bonds of 1975 held by the Association are in default.

Expenditures totaling \$854.00 were incurred during the current year in connection with a testimonial to be presented to Dr. Davis R. Dewey, Managing Editor of the *American Economic Review*.

The increase in administrative and other operating expenses is accounted for principally by an increase in the salary of the Secretary-Treasurer and increased expenses in connection with the 1940 annual meeting.

Beginning in 1939 remaining copies of *Economic Essays* were offered for sale at \$1.00 per copy. The inventory price of the copies on hand at December 13, 1939, was accordingly reduced to \$1.00 less an allowance for postage; the aggregate reduction of \$713.57 was charged to the income account for 1939. No similar adjustment was required during the current year.

Net publication expense increased \$2,611.14 as shown by the following summary:

Particulars	Fiscal Year		Budgetary Estimates for 1940
	1939	1940	
Expenses—			
Printing of—			
<i>Review</i>	\$ 6,494.67	\$ 6,794.42	\$ 6,500.00
<i>Proceedings</i>	1,785.91	2,658.12	
<i>Handbook</i>	*	822.58	
Editor's honorarium	2,500.00	2,500.00	2,500.00
Payments to contributors	1,453.50	1,439.00	1,600.00
Editorial clerical salaries	3,032.10	3,121.65	3,200.00
Other costs and expenses	406.78	577.72	400.00
Total expenses	<u>\$15,672.96</u>	<u>\$17,913.49</u>	<u>\$14,200.00</u>
Less— Income—			
Subscriptions, other than from members	\$ 6,202.32	\$ 6,320.79	
Sales of copies	703.79	468.18	
Advertising	1,877.47	1,624.00	
Total income	<u>\$ 8,783.58</u>	<u>\$ 8,412.97</u>	
Net publication expense	<u>\$ 6,889.38</u>	<u>\$ 9,500.52</u>	

* None issued in 1939.

Printing expenses for 1940 include a charge of \$822.58 for publication of a handbook for which no corresponding charge was incurred in 1939. Other print-

ing costs increased as a result of the increase in the number of copies and pages printed.

The Association issued the following publications during the years 1939 and 1940:

	Quantity Printed		Number of Pages	
	1939	1940	1939	1940
<i>Review</i>	4,600-4,700	4,900-5,000	1,024	1,044
<i>Proceedings</i>	4,600	4,900	288	444
<i>Handbook</i>	—	5,000	—	108

Financial Condition

Condensed balance sheets of the Association at December 13, 1939, and December 12, 1940, are set forth in the following comparison:

Assets	Year Ended		Increase or Decrease
	Dec. 13, 1939	Dec. 12, 1940	
Cash in bank	\$ 4,042.50	\$ 1,437.51	\$2,604.99
Receivables, net	801.76	981.80	180.04
Inventories	876.06	694.98	181.08
Furniture, fixtures, etc., at cost	1,673.11	1,676.72	3.61
Reserve for depreciation	1,324.29	1,458.29	134.00
Investments, at cost—			
Bonds	20,039.57	22,519.80	2,480.23
Stocks	41,155.95	41,155.95	—
	<u>\$67,264.66</u>	<u>\$67,008.47</u>	<u>\$ 256.19</u>
Liabilities			
Accounts payable	\$ 1,796.17	\$ 875.71	\$ 920.46
Unearned income	3,044.78	2,934.22	110.56
Membership extension fund	3,322.86	3,081.56	241.30
Fund for proposed permanent secretariat	35.00	35.00	—
Life memberships	3,700.00	3,700.00	—
Surplus—			
Balance at beginning of period	52,227.93	55,365.85	3,137.92
Net income for period	3,112.92	1,016.13	2,096.79
Transfers from life memberships	25.00	—	25.00
	<u>\$67,264.66</u>	<u>\$67,008.47</u>	<u>\$ 256.19</u>

Cash in bank was reconciled with the balance confirmed direct to us by the depositories.

We did not confirm the receivables of the Association by correspondence with the debtors. The reserve for doubtful accounts appears to be sufficient to cover such losses in collection as could be estimated at the time of our examination.

The inventories of the Association include 440 copies of *Economic Essays*. During the year 57 copies were sold at the advertised price of \$1.00 each, but the realization of the remaining inventory valuation appears doubtful.

The following securities were purchased and sold in 1940:

	Purchase or Selling Price
Purchases—	
United Stockyards Corporation—	
15 year collateral trust bonds—Series A—4¼% due October 1, 1951 (nondeductible common stock purchase warrant evidencing right to purchase 30 shares of common stock at \$10.00 per share any time on or before October 1, 1951, attached), \$1,000 principal amount	\$ 905.33
The Shawinigan Water and Power Company—	
General first mortgage and collateral trust bonds—Series A—4½% due October 1, 1967, \$2,000 principal amount	1,801.15
Interlake Iron Corporation—	
4% convertible debentures due August 15, 1947, \$1,000 principal amount	980.33
Dominion of Canada Loan—	
20 year Series "R-2" 5% due October 15, 1943, \$1,000 principal amount	802.85
	<u>\$4,489.66</u>
Sales—	
Gulf States Steel Company—	
First mortgage sinking fund bonds 4½% due October 15, 1961, \$1,000 principal amount	\$1,049.03
Alabama Power Company—	
First and refunding mortgage bonds 5% due November 1, 1956, \$1,000 principal amount	1,039.18
	<u>\$2,088.21</u>

The ownership of the investments of the association was confirmed by correspondence with the custodians.

In so far as we could ascertain from the examination made, all liabilities of the Association at December 12, 1940, are reflected in the accompanying balance sheet and the Secretary-Treasurer has represented that to the best of his knowledge and belief all liabilities were disclosed to us. We did not confirm the liabilities of the Association by correspondence with the creditors.

We wish to express our appreciation of the courtesies and co-operation extended to our representatives during the course of the examination.

Very truly yours,

ARTHUR ANDERSEN AND COMPANY

EXHIBIT 1

AMERICAN ECONOMIC ASSOCIATION
BALANCE SHEET—DECEMBER 12, 1940*Assets*

CURRENT ASSETS:

Cash in bank—

State Bank and Trust Company, Evanston,
Illinois

\$ 614.81

Madison-Crawford National Bank, Chicago,
Illinois

822.70

\$ 1,437.51

Receivables—

Interest accrued on bonds

\$ 239.25

Membership dues

298.10

Review advertising

456.64

Publication sales

52.04

Miscellaneous

90.68

Total receivables

\$ 1,136.71

Less—Reserve for doubtful accounts

154.91

981.80 \$ 2,419.31

INVENTORIES:

Economic Essays, at net selling price

\$ 426.80

Stamped envelopes, at cost

268.18

694.98

INVESTMENTS, AT COST:

Bonds (quoted price \$21,127.50)

\$22,519.80

Stocks (quoted price \$40,154.39)

41,155.95

63,675.75

FURNITURE, FIXTURES AND BOUND PERIODICALS, AT COST

\$ 1,676.72

Less—Reserve for depreciation

1,458.29

218.43

\$67,008.47*Liabilities*

ACCOUNTS PAYABLE

\$ 875.71

UNEARNED INCOME:

Membership dues

\$ 403.75

Subscriptions

2,530.47

2,934.22

MEMBERSHIP EXTENSION FUND

3,081.56

FUND FOR PROPOSED PERMANENT SECRETARIAT

35.00

LIFE MEMBERS AND SURPLUS:

Life memberships

\$ 3,700.00

Surplus unappropriated—

Balance, December 13, 1939

\$55,365.85

Net income for the period from December
13, 1939 to December 12, 1940 (Ex-
hibit 2)

1,016.13

56,381.98

60,081.98

\$67,008.47

EXHIBIT 2
 AMERICAN ECONOMIC ASSOCIATION
 STATEMENT OF INCOME AND EXPENSES
 PERIOD FROM DECEMBER 13, 1939, TO DECEMBER 12, 1940

	<i>Particulars</i>	<i>Amount</i>
INCOME FROM:		
Dues—		
Regular members	\$15,248.81	
Subscribing and contributing members	207.50	\$15,456.31
Other sources—		
Income from investments—		
Interest on bonds	\$ 1,037.56	
Dividends	2,182.46	
Total	\$ 3,220.02	
Less—Custodian's fee	96.36	\$ 3,123.66
Net profit on sale of bonds		78.78
	\$ 3,202.44	
Income from sale of <i>Economic Essays</i>	3.88	3,206.32
Total income		\$18,662.63
EXPENSES:		
Administrative and other operating expenses—		
Secretary's salary	\$ 1,500.00	
Office salaries	3,106.37	
Postage	378.19	
Stationery and supplies	191.83	
Telephone and telegraph	72.95	
Insurance	258.50	
Exchange on checks	67.37	
Depreciation	134.00	
Annual meeting	767.95	
Executive committee expenses	392.14	
Other committee expenses	286.48	
American Council of Learned Societies—dues	65.00	
Auditing	50.00	
Miscellaneous	21.20	\$ 7,291.98
Cost of testimonial to Dr. Davis R. Dewey		854.00
Publication expenses—		
Printing of—		
Review	\$ 6,794.42	
<i>Proceedings and Handbook</i>	3,480.70	
Editor's honorarium	2,500.00	
Payments to contributors	1,439.00	
Editorial clerical salaries	3,121.65	
Editorial supplies and expenses	395.15	
Editor's traveling expenses	152.30	
Sundry publication expenses	30.27	
Total publication expenses	\$17,913.49	
Less—Publication income—		
Subscriptions, other than from members	\$6,320.79	
Sale of copies	468.18	
Advertising	1,624.00	8,412.97
		9,500.52
Total expenses		17,646.50
Net income (Exhibit 1)		<u>\$ 1,016.13</u>

REPORT BY OUR REPRESENTATIVE ON THE BOARD OF DIRECTORS OF THE NATIONAL BUREAU OF ECONOMIC RESEARCH

At the twenty-first annual meeting of the Board of Directors of the National Bureau, held on February 8, 1940, David Friday, who had been a Director by Appointment of the American Economic Association since the foundation of the National Bureau, was elected Chairman of the Board and a Director-at-Large. W. Leonard Crum was elected President. The undersigned was elected Director by Appointment of the American Economic Association. During the year the Board has held two series of meetings at Hillside in order better to acquaint itself in detail with the rapidly expanding work of the National Bureau. This innovation has had results of such value both to the Board and to the staff that it has been decided to continue the practice. The Board may be expected, therefore, to become an even more active participant in the functioning of the Bureau than has been the case in the past.

These meetings have demonstrated to Board members how inadequately one can judge the work of the National Bureau by its current publications alone. A full account of the projects now under way, which would be necessary to illustrate this point, would be impossible in this report. Suffice it to say that, in many lines, the fruits of recent and current study will not appear for some years. When they do appear, they are likely to take the form of a series of monographs rather than of a single, definitive treatise. In the Financial Research Program, carried on with grants from the Association of Reserve City Bankers and the Rockefeller Foundation, the Studies in Consumer Instalment Financing, which were initiated three years ago, began to appear only in 1940. Seven volumes have been published, two are in manuscript, and three, including a summary, are still in preparation. A second part of this program, the Corporate Bond Project, which involves one of the most complex pieces of tabulation the writer has ever seen, will not reach the point at which any results can be published for some time. A third part, investigation of the supply of and demand for short-term credit, has made a good beginning. The preparation and analysis of time series for the proposed monograph studies on business cycles have required much effort and many years and are still far from completed; however, a first report is in manuscript. Work on wages, labor, and prices is being concentrated on cyclical aspects to tie in with these studies. Two volumes on national income estimates are now being read in manuscript by the Directors. These will represent, at least for the present, the last publications by the Bureau on the subject to which its earliest efforts were devoted. As already announced, the Department of Commerce has relieved the National Bureau of the task of preparing current estimates of national income. Finally, the new program of Research in Fiscal Policy is now getting under way.

One notable undertaking has been completed this year with the publication of *The International Gold Standard Reinterpreted, 1914-1934*, by William Adams Brown, Jr. Outlined in 1926, initiated in 1932 under the auspices of Brown University and the Rockefeller Foundation, it was taken under the National Bureau's wing in 1934. It invades, by way of a purely objective approach, one of the almost unpoached happy hunting grounds of a priori theory. It is,

therefore, not only an excellent example of the National Bureau's purpose and method but, also, to a marked degree, a pioneer work in this particular field.

Another project was completed in 1940 with the publication of *Residential Real Estate, Its Economic Position as Shown by Values, Rents, Family Incomes, Financing, and Construction, together with Estimates for All Real Estate*, by David L. Wickens. It was started in 1935 as a part of a program of studies in banking policy and credit control in relation to economic stability, outlined and planned by the Division of Industry and Trade of the Social Science Research Council. The facts made available in the volume provide the basis for a better understanding of real estate financing and of mortgage operations. They serve further to make clear the relations of these processes to the economy as a whole, and are a ready source to which makers of public policy and directors of business enterprises, as well as students generally, can turn for basic information. Other studies by the National Bureau under this program are those of capital formation by Simon Kuznets, the first two of which were issued in 1937 and 1938.

The first report upon a major project, *Studies in Production and Productivity*, carried on with funds granted by the Maurice and Laura Falk Foundation, is *The Output of Manufacturing Industries, 1899-1937*, by Solomon Fabricant. This volume deals particularly with changes in aggregate factory output and with shifts in the character of goods produced, and incidentally indicates how extensive have been the invasions by industry into the field of the domestic economy. A bulletin by Mr. Fabricant, treating in detail the standing of manufacturing production in 1937 relative to that in 1929, concerning which there has been much discussion recently, has just been released.

In another important bulletin, entitled *The Anatomy of Prices, 1890-1940*, Frederick C. Mills has continued his series of price studies. This one brings into high relief the remarkable changes in "exchange relations" between the several economic groups forming the productive population that have occurred in the past fifty years.

Perhaps the most conspicuous development of the National Bureau's activities in recent years is the extent to which it is becoming a general center for co-operation in economic research. In the report of the Chairman of the Committee on Research in Finance, presented at the last meeting of the Board, forty-one typewritten pages were required merely to list the names of individuals and institutions that are collaborating in one way or another on these projects. While numbers of participants may mean little, in this case the degree and quality of participation was shown to be high. The Universities-National Bureau Committee is proving to be an effective means for furthering collaborations in research, for eliminating duplication, and for finding common bases. The three conferences organized under its sponsorship—on research in prices, in income, and in fiscal policy—and the fourth, on financial research, which has been adopted by it—are all active. The three volumes of *Studies in Income and Wealth*, the three volumes of reports on price research in various industries, as well as the publications in the financial program, are tangible evidence of the results which are being obtained. The number of individuals and institutions that have helped in the preparation of these books is another sign of the pro-

gressive ramifications of the National Bureau's fruitful contacts and its co-ordination with other agencies. No longer can the National Bureau be credited with the whole "productivity" in respect of the output that bears its imprint; neither can its own "value-product" be imputed solely on the basis of this output. It is becoming "national" in deed as well as in name.

Respectfully submitted,

C. REINOLD NOYES

PUBLICATIONS

OF THE

AMERICAN ECONOMIC ASSOCIATION

1941

FIRST SERIES

Numbers starred are sold only with the sets; the supply of those double starred is exhausted. For information apply to the Secretary.

Volume I, 1886

	<i>Price in paper</i>
1. Report of Organization of the American Economic Association. Pp. 46.	\$.50
2-3. **Relation of the Modern Municipality to the Gas Supply. By E. J. James. Pp. 66.	.75
4. Co-operation in a Western City. By Albert Shaw. Pp. 106.	.75
5. ** Co-operation in New England. By E. W. Bemis. Pp. 136.	.75
6. ** Relation of the State to Industrial Action. By H. C. Adams. Pp. 85.	.75

Volume II, 1887

1. Three Phases of Co-operation in the West. By Amos G. Warner. Pp. 119.	.75
2. Historical Sketch of the Finances of Pennsylvania. By T. K. Worthington. Pp. 106.	.75
3. The Railway Question. By Edmund J. James. Pp. 68.	.75
4. **Early History of the English Woolen Industry. By W. J. Ashley. Pp. 85	.75
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Volume III, 1888

1. Statistics in College, by C. D. Wright; Sociology and Political Economy, F. H. Giddings; The Legal-Tender Decisions, by E. J. James. Pp. 80.	.75
2. Capital and Its Earnings. By John B. Clark. Pp. 69.	.75
3. The Manual Laboring Class, by F. A. Walker; Mine Labor in the Hocking Valley, by E. W. Bemis; Report of the Second Annual Meeting. Pp. 86.	.75
4-5. ** Statistics and Economics. By Richmond Mayo-Smith. Pp. 127.	1.00
6. The Stability of Prices. By Simon N. Patten. Pp. 64.	.75

Volume IV, 1889

1. Contributions to the Wages Question: The Theory of Wages, by Stuart Wood; Possibility of a Scientific Law of Wages, by J. B. Clark. Pp. 69. \$.75
2. Socialism in England. By Sidney Webb. Pp. 73. .75
3. Road Legislation for the American State. By J. W. Jenks. Pp. 83. .75
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5. ** Malthus and Ricardo, by S. N. Patten; The Study of Statistics, by D. R. Dewey; Analysis in Political Economy, by W. W. Folwell. Pp. 69. .75
6. An Honest Dollar. By E. Benjamin Andrews. Pp. 50. .50

Volume V, 1890

1. The Industrial Transition in Japan. By Yeiji-ro Ono. Pp. 122. 1.00
2. Two Essays on Child-Labor. By W. F. Willoughby and Clare de Graffenried. Pp. 150. .75
- 3-4. Papers on the Canal Question. By E. J. James and L. M. Haupt. Pp. 85. 1.00
5. History of the New York Property Tax. By J. C. Schwab. Pp. 108. 1.00
6. Educational Value of Political Economy. By S. N. Patten. Pp. 36. .75

Volume VI, 1891

- 1-2. Fourth Annual Meeting: Reports, Papers, Discussions. 1.00
3. Government Forestry. Papers by Pinchot, Bowers, and Fernow. Pp. 102. .75
- 4-5. Municipal Ownership of Gas in the U.S. By E. W. Bemis. Pp. 185. 1.00
6. State Railroad Commissions. By F. C. Clark. Pp. 110. .75

Volume VII, 1892

1. ** The Silver Situation in the United States. By F. W. Taussig. Pp. 118. .75
- 2-3. ** Shifting and Incidence of Taxation. By E. R. A. Seligman. Pp. 424 (Revised.) 2.00
- 4-5. Sinking Funds. By Edward A. Ross. Pp. 106. 1.00
6. The Reciprocity Treaty with Canada of 1854. By F. E. Haynes. Pp. 70. .75

Volume VIII, 1893

1. Fifth Annual Meeting: Report of the Proceedings. Pp. 130. .75
- 2-3. Housing of the Poor in American Cities. By M. T. Reynolds. Pp. 132. 1.00
- 4-5. Public Assistance of the Poor in France. By E. G. Balch. Pp. 180. 1.00
6. First Stages of the Tariff Policy of the U.S. By William Hill. Pp. 162. 1.00

Volume IX, 1894

- Sixth Annual Meeting: Handbook and Report. Pp. 73. .50
- 1-2. ** Progressive Taxation in Theory and Practice. By Edwin R. A. Seligman. Pp. 222. (See 1908, No. 4.) 1.00
3. ** The Theory of Transportation. By C. H. Cooley. Pp. 148. .75
4. Sir William Petty. By Wilson Lloyd Bevan. Pp. 102. .75
- 5-6. Papers on Labor Problems. By J. B. Clark, C. D. Wright, D. R. Dewey, A. T. Hadley, and J. G. Brooks. Pp. 94. .75

Volume X, 1895

- Seventh Annual Meeting: Handbook and Report. Pp. 138. .50
- 1-3. ** The Canadian Banking System, 1817-1890. By R. M. Breckenridge. Pp. 478. 1.50
4. Poor Laws of Massachusetts and New York. By John Cummings. Pp. 136. .75
- 5-6. Letters of Ricardo to McCulloch, 1816-1823. Edited by J. H. Hollander. Pp. 204. (In cloth, only.) 1.75

Volume XI, 1896

- 1-3. ** Race Traits and Tendencies of the American Negro. By F. L. Hoffman. Pp. 330. 1.25
4. Appreciation and Interest. By Irving Fisher. Pp. 110. .75
- * General Index to Volumes I-XI. (1886-1896.) .25

ECONOMIC STUDIES

(\$2.50 per volume)

Volume I, 1896

- Eighth Annual Meeting: Handbook and Report. Pp. 78. \$.50
1. The Theory of Economic Progress, by J. B. Clark; The Relation of Changes in the Volume of the Currency to Prosperity, by F. A. Walker. Pp. 46. .50
 2. The Adjustment of Wages to Efficiency. Three Papers: Gain Sharing, by H. R. Towne; The Premium Plan, by F. A. Halsey; A Piece-Rate System, by F. W. Taylor. Pp. 83. .50
 3. ** The Populist Movement. By Frank L. McVey. Pp. 81. .50
 4. The Present Monetary Situation. By W. Lexis; translated by John Cummings. Pp. 72. .50
 - 5-6. The Street Railway Problem in Cleveland. By W. R. Hopkins. Pp. 94. .75

Volume II, 1897

- Ninth Annual Meeting: Handbook and Report. Pp. 162. .50
1. Economics and Jurisprudence. By Henry C. Adams. Pp. 48. .50
 2. The Saloon Question in Chicago. By John E. George. Pp. 62. .50
 3. The General Property Tax in California. By C. C. Plehn. Pp. 88. .50
 4. Area and Population of the United States at the Eleventh Census. By W. F. Willcox. Pp. 60. .50
 5. A Discussion Concerning the Currencies of the British Plantations in America, etc. By William Douglass. Edited by C. J. Bullock. Pp. 228. .50
 6. Density and Distribution of Population in the United States at the Eleventh Census. By W. F. Willcox. Pp. 79. .50

Volume III, 1898

- Tenth Annual Meeting: Handbook and Report. Pp. 136. .50
1. Government by Injunction. By William H. Dunbar. Pp. 44. .50
 2. Economic Aspects of Railroad Receiverships. By H. H. Swain. Pp. 118. .50
 3. The Ohio Tax Inquisitor Law. By T. N. Carver. Pp. 50. .50
 4. The American Federation of Labor. By Morton A. Aldrich. Pp. 54. .50
 5. Housing of the Working People in Yonkers. By E. L. Bogart. Pp. 82. .50
 6. The State Purchase of Railways in Switzerland. By Horace Michelié; translated by John Cummings. Pp. 72. .50

Volume IV, 1899

- Eleventh Annual Meeting: Handbook and Report. Pp. 126. .50
1. I. Economics and Politics. By A. T. Hadley. II. Report on Currency Reform. III. Report on the Twelfth Census. Pp. 70. .50
 2. Personal Competition. By Charles H. Cooley. Pp. 104. .50
 3. Economics as a School Study. By F. R. Clow. Pp. 72. .50
 - 4-5. The English Income Tax. By J. A. Hill. Pp. 162. 1.00
 6. ** Effects of Recent Changes in Monetary Standards upon the Distribution of Wealth. By F. S. Kinder. Pp. 91. .50

NEW SERIES

1. ** The Cotton Industry. By M. B. Hammond. Pp. 382. 1.50
2. Scope and Method of the Twelfth Census. Critical discussion by over twenty statistical experts. Pp. 625. 2.00

THIRD SERIES

Note—During 1896-1899 the Association issued its publication in two series, viz., the bimonthly Economic Studies, and the "New Series" of larger monographs printed at irregular intervals. In 1900 it reverted to the policy of issuing its monographs, now called the "Third Series" of the publications at quarterly intervals.
Price per volume, \$4.00.

Volume I, 1900

1. Twelfth Annual Meeting: Papers on Economic Theory and Political Morality; Trusts; Railroad Problems; Public Finance; Consumers' League; Twelfth Census. Pp. 186. \$1.00
2. ** The End of Villeinage in England. By T. W. Page. Pp. 99. 1.00
3. Essays in Colonial Finance. By Members of the Association. Pp. 303. 1.50
4. ** Currency and Banking in the Province of Massachusetts Bay. By A. McF. Davis. Part I: Currency. Pp. 464 + 91 photogravure plates. 1.75

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